



കേരളം സർക്കാർ  
തദ്ദേശ സ്വയംഭരണ വകുപ്പ്



**SUCHITWA  
MISSION**  
LOCAL SELF GOVERNMENT DEPARTMENT KERALA



# Annual Report 2020-21





# **Suchitwa Mission**

**Local Self Government Department**

**Government of Kerala**

**Annual Report 2020-21**



# Message



The year 2020-21 will be a landmark in the sanitation history of the state as we could extend our focus to various branches of waste management. To strengthen the institutional and service delivery systems for solid waste management in Kerala, the state has launched Kerala Solid Waste Management Project with the financial support, technical assistance and capacity building support of world bank at state and Local Self Government levels for undertaking their SWM interventions. It is expected to launch the project in 2021 and to finish the interventions within a time span of 6 years. Another major development happened during the period was expanding the scope of Take-a-break projects as the number of high quality toilets were increased to 200 nos.

The Local self-governments are becoming more and more sensitized towards implementing Waste management projects as many of them have achieved Sanitation Status declared by state-government. 715 Grama Panchayats and 78 urban local bodies have attained Suchitwa Padavi during the year based on the assessment done by a team deputed by the government for this purpose. Suchitwa Mission has played a pivotal role in realizing this through coordination and intense monitoring.

The implementation of Swachh Bharat Mission programs has resulted in ensuring source level management of biodegradable waste by way of home composting and bio-methanation process at almost 6 lakh households in Kerala. There are facilities established at community level and institutional levels also for managing overflow waste. Harithakaeralam Mission's interventions have helped the state in establishing a clear-cut strategy for dry-waste management. There are more than 994 Material Collection facilities and 169 Resource Recovery Facilities made available for ensuring resource recovery and recycling. The formation of Harithakarmasena in all LSGIs in the state has resulted in employment generation for Women at Grass-roots level.

The green-protocol concept has now become an enviro-cultural revolution that has even resulted in transforming 10000 government offices as green offices.

**Mir Mohammad Ali IAS**  
Executive Director



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## Status Regarding Waste Generation and Processing

Organic Waste Generation



tonne/day

Non-organic Waste Generation

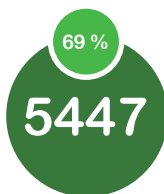


tonne/day

Total Solid Waste Generation in Kerala **10498 tonne/day**

### Quantity of Waste Processing per day

Organic Waste



tonne/day

Non-organic Waste



tonne/day

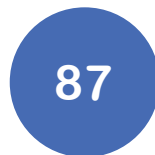
### Progress Highlights

Harithakarmasena Started Functioning at 949 LSGIs

Grama Panchayats



Municipalities



Corporations

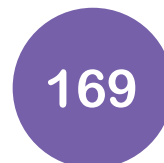


Total no. of Harithakarmasena Members 30588

Material Collection Facilities

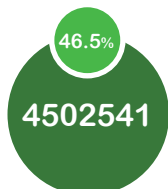


Resource Recovery Facilities



Total No. of Houses covered by Haritha Karma Sena through door to door collection of dry waste

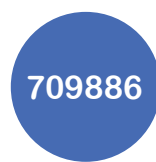
Total Houses



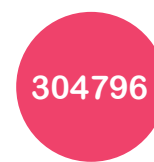
Grama Panchayats



Municipalities



Corporations





## Glimpses of Sanitation & Waste management facilities in the state

- 12 Community biogas plants completed and 40 are coming-up under Gobardhan scheme of SBM (G)
- 3810 Community Compost facilities including 1430 Thumboormuzhi model Aerobic Bins
- 14453 Households level compost pits through MGNREGS
- Chicken rendering plants in 11 districts (PPP model)
- Hair waste processing plants in Kasargod, Kannur, and Kozhikode districts
- Retrofitting of 12300 Toilet
- Take-a-break Vazhiyidom facilities (Integration with CSS, SBM and State Plan Fund) 100 completed; 542 in progress; 1213 are tendered



## **SUCHITWA MISSION**

# **Annual Report 2020-2021**

Suchitwa Mission is the Technical Support Group (TSG) in Waste Management sector under the Local Self Government Department, Government of Kerala which is responsible for providing technical and managerial support to the Local Self Governments of the State. The Mission is also the Nodal agency for implementing Swachh Bharat Mission (Urban), Swachh Bharat Mission (Rural) and Communication and Capacity Development Unit (CCDU) in the State. Also responsible for conceptualizing, action planning, conducting creative workshops, organizing training programmes, initiating sector related studies, bringing out occasional papers, initiating action research, conducting monitoring and such other activities in Waste Management Sector.

During the year 2020-21 Suchitwa Mission undertook implementation of 4 major schemes namely Suchitwa Keralam (Rural), Suchitwa Keralam (Urban), Swachh Bharat Mission (Rural) and Swachh Bharat Mission (Urban). In addition, it has functioned as the implementing agency for Haritha Keralam Mission.

## VISION

Waste free Kerala with unpolluted environment, public hygiene and cleanliness with better quality of life leading to improved health and general wellbeing, economic gains, better aesthetic surroundings and overall environmental up-gradation.

## MISSION OBJECTIVES

- ★ Scientific management of municipal solid waste through orienting the people on importance of waste reduction, resource recovery, re-use & recycling and establishing system at each LSGI level for resource recovery, composting system at source level.
- ★ Sustaining Open Defecation Free state status through ensuring access to toilet facilities to 100 % of the people in the state and achieving ODF++ status to Local Bodies
- ★ Establishing system for scientifically managing liquid waste generated in the state
- ★ Ensure that the e-waste generated in the state are scientifically managed by orienting people, LSGIs and other stakeholders on the scope for forward linkages.

## Mandate of Suchitwa Mission

- Assist Cities, Municipalities and Grama Panchayats or three tiers to evolve policies and strategies for the preparation of Detailed Project Reports (DPRs) and programmes for solid and liquid waste management in the State
- Facilitate the preparation of DPRs by providing technical training to concerned staff of LSGIs and by consultations at individual LSGI level
- Assist Cities, Municipalities and Panchayats by providing technical approvals for their projects envisaged for solid and liquid waste management and providing grants which are allocated by Government from time to time
- Co-ordinate various activities under Swachh Bharat Mission (Gramin) and Swachh Bharat Mission (Urban) sponsored by the Government of India (Executive Director, Suchitwa Mission is the State Coordinator)
- Organize appropriate Information, Education and Communication (IEC) and Capacity Development activities aimed at the attitudinal and behavioral change of people at large and capacity development of all concerned stakeholders (Executive Director, Suchitwa Mission is the State Director of Communication and Capacity Development Unit, funded by the Government of India)

## Status Regarding Kerala's Waste Generation and its management

Kerala generates 10505 TPD of Solid Waste; 3472 by Urban Local Bodies and 7032 by Grama Panchayats. 49% of the waste is generated in households, 36% in institutions and 15% in public places. 77% (6410TPD) of wastes are biodegradable, 18% are non-biodegradable, and 5% are insert wastes. The 6410 TPD Biodegradable

Waste and 592 TPD of Plastic Waste are the major segments of Solid Wastes which need to be addressed on a priority basis. In the context of Covid 19 there is also an increasing trend of bio-medical wastes and plastics.

Districts		Quantity of Waste Generation (Tonne per day)		Quantity of Waste Processing		% of Bio-Degradable waste Processing	% Non Bio-Degradable waste Processing
		Bio-Degradable	Non Bio-Degradable	Bio-Degradable	Non Bio-Degradable		
Trivandrum	Rural	668.0	92.0	144.3	66.3	39.1	72.1
	Urban	306.5	121.9	230.48	91.125	75.3	74.8
Kollam	Rural	638.4	143.2	587.3	121.7	92.0	85.0
	Urban	148.3	60.1	118.6	49.2	80.0	82.0
Pathanamthitta	Rural	224.0	96.0	156	76.8	70.0	80.0
	Urban	36.9	16.0	25.83	12	70.0	80.0
Alapuzha	Rural	388.0	166.0	291	99	75.0	60.0
	Urban	133.0	39.0	110	30	82.0	76.9
Kottayam	Rural	425.0	210.0	298	150	70.0	71.0
	Urban	250.0	65.0	188	46	75.0	70.0
Idukky	Rural	162.3	40.6	130	28.82	80.0	71.0
	Urban	22.7	5.7	16.57	3.8	73.1	66.0
Ernakulam	Rural	379.0	162.0	265	72.9	70.0	45.0
	Urban	356.0	152.0	213	71.44	60.0	47.0
Thrissur	Rural	471.4	117.8	32	8	6.79	6.79
	Urban	243.1	60.8	200	30	82.27	49.37
Palakkad	Rural	522.8	219.6	434.23	178.15	83.06	81.12
	Urban	70.1	28.9	53.27	24.58	76.02	85.17
Malapuram	Rural	659.1	164.8	540.48	121.94	82.00	74.00
	Urban	163.5	40.9	132.41	31.06	81.00	76.00
Kozhikode	Rural	490.2	128.1	392.16			
	Urban	298.0	150.0	212	102.2	80.0	71.0
Wayanad	Rural	133.6	62.9	83.16	57.61	62.2	91.6
	Urban	25.9	11.6	17.92	10.11	69.2	87.2
Kannur	Rural	338.0	86.0	294	77	86.0	89.0
	Urban	174.0	38.0	144	31	82.0	81.0
Kasargode	Rural	167.7	71.9	109.02	53.31	65	74.14
	Urban	41.0	17.6	28.68	13.02	70.0	74.0
<b>Total</b>		<b>7936.4</b>	<b>2568.2</b>	<b>5447.4</b>	<b>1657.1</b>	<b>68.6</b>	<b>64.5</b>

Currently, nearly 75% of biodegradable waste is treated at households, institutions, and community level. With the present envisaged projects for installation of almost 6 lakh household level composting or bio-methanation units, the waste treatment capacity will increase to 85 - 90%.

The non-biodegradable waste is collected from the sources and temporarily stored in Material Collection Facility (MCF). There are a total of 994 operational MCFs and 169 RRF facilities across the state and 949 LSGIs are having Harithakarmasena operations under its purview.

The non-biodegradable waste is collected by LSGs from the door-steps of 46 lakh sources (35.7 Lakh in RLBs and 10.3 Lakh in ULBs) by 1461 (1082 in RLBs and 379 in ULBs) active Haritha Karma Sena Units (Micro-enterprise groups formed and trained under Kudumbasree) and other partner collection agencies. Those waste which are collected through door-to-door collection and other directly received non-biodegradable wastes are temporarily stored in 994 Material Collection Facilities (MCF & Mini MCFs) operated across the state.

The Plastic Waste stored in the MCF are then sub-segregated and sold to partner companies for recycling or processed (shredded and bailed) in 169 Resource Recovery Facilities (RRF-Plastic Shredding Units) in the state and then sold to Clean Kerala Company to be reused particularly for road-tarring. The government has also issued orders for mandatory usage of shredded plastics for road tarring.

E-Waste of 173 tonnes is collected by Clean Kerala Company in 2019-20 FY and 77 tonnes collected during the 2020-21 financial year. The e-waste collected is now being transported to recycling

plants of other states since the state does not have its own e-Waste recycling facilities. An E-Waste processing plant of 5 TPD capacity is under construction in Kuttippuram, Malappuram.

Bio-Medical Waste generation has quickly risen in the context of Covid 19 pandemic. And the local bodies have partnered with the IMAGE to handle these wastes. Kerala already has a Common Bio-medical Waste Treatment Plant of 55.8 TPD in Palakkad and another two are under consideration in Brahmapuram and Ambalamugal in Ernakulam.

Industries themselves are legally bound to manage Hazardous Wastes and thus prevented them from entering the ecosystem. A Common hazardous Waste Disposal facility of 130 TPD capacity is functioning at Ambalamugal, Ernakulam which is managed by Kerala Envio Infrastructure Limited.

The local governments are mandated to manage the waste generated within their domain as per the prevailing rules under Environmental (Protection) Act, 1986, Kerala Municipality Act, 1994 and Kerala Panchayat Raj Act, 1994. As mandated in the Solid waste management Rules 2016, Govt. of Kerala constituted a State Level Advisory Board vide G.O (Rt) No. 140/2018/LSGD dated 16.01.2018. Kerala have also notified a State Policy on Solid Waste Management in terms of Rule 11 and 15 of Solid Waste Management Rules, 2016. As notified in the policy, the State is adopting the following strategies for achieving sustainable waste management systems.

- Mandatory segregation of waste at source based on its primary characteristics
- Establish door to door collection of non-biodegradable waste from all sources for bulk handling and ensure their reuse and recycling to the maximum extent
- Aerobic or anaerobic composting of biodegradable waste at source (household & institutions) as far as possible
- Ensure decentralized community facilities for biodegradable waste that overflows from the source
- Promote modern centralized waste processing facilities in major cities using state of the art technologies
- Evolve a procedure for handling domestic hazardous waste and promote its implementation
- Promote provision of storage bins for dumping wet and dry waste by all vendors and institutions including shops, retail joints, supermarkets, hotels, hospitals, railway and bus stations for the use public
- Enforce captive waste management systems for the bulk waste generators
- Make use of the enabling environment created under the Haritha Kerala 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
- Prevent or discourage single use and throw away materials
- Hygienic and aesthetic upkeep of public places by ensuring regular sweeping, cleaning and beautification
- Enable the reuse, recycle and value addition of construction and demolition waste
- Rationalize and strengthen the enforcement of rules and penalty provisions
- Promote automated grievance redressal system for citizen
- Undertake appropriate Information, Education, and Communication campaign
- Coordinate appropriate capacity building programmes for stakeholders
- Develop appropriate community monitoring system for ensuring continues improvement in waste management
- Network with academic and research & development institutions for updation of technologies and application protocols
- Enlarge the service provider domain through encouraging start-ups among professionals and skilled youths.
- Smart Garbage App for waste info Management

## **Fund Provisions for LSGIs for sanitation and waste management facilities**

- Grama panchayats in the state should mandatorily earmark 10% of their plan fund (15% in case of ULBs) for sanitation and waste management activities.
- Besides the entitlement under plan fund, LSGIs are entitled for fund provisions under SBM (Gramin) and SBM (Urban)
- LSGIs can also formulate sanitation and waste management projects under Suchitwa Keralam Rural & Urban Schemes of Suchitwa Mission where mission source fund from state plan.
- 15th Finance Commission Grant.

## **Programmes implementing by Suchitwa Mission under different schemes**

Suchitwa Mission undertook implementation of 4 major schemes namely Suchitwa Keralam (Rural), Suchitwa Keralam (Urban), Swachh Bharat Mission (Rural) and Swachh Bharat Mission (Urban). In addition, it has also functioned as the implementing agency for the Haritha Keralam Mission.



## Suchitwa Keralam Rural & Urban)

The state government is giving utmost priority to source waste treatment in the solid waste treatment sector. Unit cost has been determined by identifying suitable technologies for bio-waste treatment. The Government provides partial funding for projects undertaken by Grama Panchayats and Urban Councils in their respective area. Pre-monsoon activities are being spearheaded by the local bodies to control the spread of pandemic and other infectious diseases in the state during the months of June-July. Awareness campaigns are being conducted through audio-visual and print media to create habits suitable for scientific waste management among the people.

About 70% - 80% of the total waste generated is bio-waste and they are wet. To cultivate it, the slogan "My waste is my responsibility" was propagated and arrangements were made to treat it at source accordingly. Bio-waste is treated in about 60% of households using waste treatment systems. In addition, waste management at the institutional and community level is done at source. Considering the scalability and ease of operation and maintenance, bio-stream technologies such as composting and bio-methanation using different mode of techniques are used to handle bio-waste at the source itself. There are mini, medium and major bio-waste treatment systems at the household, institutional and community level. The community

systems established at markets, waysides or such other places take care of the overflow waste from households, institutions and public places, who have constraints to own and maintain independent systems. Hence, projects for setting-up source level composting facilities are formulated and this serves waste management needs of 199806 households and institutions in the state.

In order to facilitate the implementation of source level waste management projects, Suchitwa Mission has empanelled service-providers and these agencies are providing support to the LSGIs in establishing source level treatment facilities through the projects envisaged by them.

The major activities undertaken under Suchitwa Keralam scheme are enhancing the infrastructure capability for source level treatment of biodegradable waste along with door-to-door collection of non-biodegradables and their recycling. For the purpose, it is proposed to form Harithakarmasena, construct MCF & RRF, establish forward linkages etc at LSGI level.

# 1. Suchitwa Keralam (Rural)

The Scheme has the following components.

- Pre-Monsoon cleaning campaign (Arogya Jagratha)
- Solid Waste Processing Plant and its modification
- Source Level Treatment of waste
- Liquid Waste Management including Septage Treatment Plant
- Intensive IEC activities including workshop, R&D and capacity building
- Solid waste collection, transportation facilities and equipment for waste handling
- Initial handholding support for SHGs/small scale entrepreneurs involved in waste management supporting services
- Study, Research on Material use and Waste, Policy Standards and guidelines for Solid and liquid waste management & other innovations in sanitation.
- Mechanization of septage management
- Social security safeguards for sanitation workers
- Administrative cost

The Pre-monsoon Cleaning Campaign has been implemented in collaboration with Directorate of Health Services, National Health Mission and Haritha Keralam Mission. Detailed action plan has been drafted and discussed with the collaborating agencies and brought out as an operational government circular. The fund earmarked for the purpose has been obtained and disbursed through direct transfer to the Grama Panchayats. Based on the guidelines field level activities were monitored through District Offices. The positive outcome of the campaign was relatively higher mainly owing to pre-campaign planning, integration of activities by different departments and effective convergence of fund at the local government level.

10 ULBs undertook projects under Suchitwa Keralam Urban Scheme at a total outlay of Rs. 56120592 and 25 GPs under Suchitwa Keralam Rural Scheme at an outlay of Rs. 41303510. Details regarding expenditure Status are as given under

## 1.1 Details of SWM projects taken-up by Districts under Suchitwa Kerala Urban

Districts	No. Of ULBs undertook Projects	Total No. of Projects	Total Project Cost	Expenditure during 20-21
Trivandrum	4	4	4800000	0
Alapuzha	1	2	37277000	0
Kottayam	2	3	1823992	1797033
Thrissur	1	4	9969600	9969600
Kannur	2	2	2250000	2250000
<b>Total</b>	<b>10</b>	<b>15</b>	<b>56120592</b>	<b>14016633</b>

## 1.2 Details of SWM projects taken-up by Districts under Suchitwa Keralam Rural

Districts	No. Of GPs undertook Projects	Total No. of Projects	Total Project Cost	Expenditure during 20-21
Trivandrum	5	5	7200000	0
Kollam	1	1	200000	196116
Pathanamthitta	1	1	2244812	0
Alapuzha	3	3	9995800	3407288
Kottayam	9	11	4117443	1416048
Idukky	1	1	1000000	750000
Thrissur	1	1	1893320	1893320
Kozhikode	1	1	1500000	0
Wayanad	2	30	12177135	3734920
Kannur	1	1	975,000	975000
<b>Total</b>	<b>25</b>	<b>55</b>	<b>41303510</b>	<b>12372692</b>

## Pre-monsoon Cleaning Campaign

The fund earmarked for Pre-monsoon Cleaning Campaign has been disbursed through direct transfer to the ULBs & GPs. For initiating the cleaning activities and carrying-out precautionary measures against communicable diseases, Rs. 11.69 crore and Rs. 2.44 crore is given for 717 GPs and 62 ULBs respectively. Pre-monsoon Cleaning Campaign has been implemented in the LSGIs with the support of Directorate of Health Services, National Health Mission and Haritha Keralam Mission based on the guidelines stipulated in the operational circular.

Each municipality-ward and Grama-panchayat-ward are entitled to Rs. 10000 for carrying-out pre-monsoon cleaning activities. This amount would be top-up by Health department by contributing their shares of fund which is Rs.10000 per ward. This is Rs. 20000 from Suchitwa Mission and Rs.10000 as in the case of Municipal Corporation



## 2. Harithakeralam Mission



Hygienic Waste Management for effective waste disposal, soil and water conservation. Agricultural development with a special thrust on organic farming are the three focal points of Mission Haritha Keralam.

It is a public-centric Mission designed to be implemented under the stewardship of the local self-governing bodies encompassing voluntary organizations, NGOs, social

activists, environmentalists, students, youths and other discerning individuals and groups. This Mission envisions to show-case a Kerala model in the realm of permanent hygienic waste management in an eco-friendly manner in a people-centric mode so as to enable Zero Waste State.

- ❖ The mission envisages a clean and green state through scientific waste management, organic farming and conservation of water resources
- ❖ To encourage people's participatory initiatives to sustainable development by protecting land, air and water bodies
- ❖ To clear and remove waste from all water bodies and revival of ponds, rivers, lakes and streams

## Major Activities under Harithakeralam Mission



### 2.1 Harithakarmasena

In order to institute door-to-door collection of non-biodegradable waste, the enterprise group namely Haritha Karma Sena (HKS) has been formed in almost all LSGIs in the state through the Kudumbasree Mission and they are trained through Kerala Institute of Local Administration (KILA) and Kudumbasree. So-far, Haritha Karma Sena started its functioning at 857 Grama Panchayath, 87 Municipalities, 5 Corporations. Viability Gap Fund is being provided for building the HKS as a sustainable group. Around 30000 members of HKS are earning livelihood through engaging in door-to-door collection of waste, extending support for source composting, rendering services as green technicians and through other micro-enterprises. During the Covid period, the activities of the Haritha Karma Sena had to be limited but later resumed in the local bodies as per the lockdown exemptions.

Measures are progressing to make these groups sustainable and self-reliant. Many of these groups are now being capable of managing their operations with-out relying-on external financial support. The resource recovery part of waste management is taken-care by HKS by way of segregated collection of clean-dry-segregated discards from households and later these items are further segregated at Material Collection facilities, into a various types which are to be used as raw-materials in recycling industry. As per the data available more than 100 tpd. of dry-discards are being collected by Harithakarmasena and converted it into resources.

## 2.2 Harithasahayasthanam

Since the LSGIs doesn't have dedicated staff to look after the waste management initiatives, it is essential to provide them with professional support to carry-out the activities and to lead the interventions of Harithakarmasena. This was materialized by engaging professional support agencies which are experienced in waste management. Earlier 51 Haritha Sahaya Sthapanam (HSS) had been rendering technical support and guidance to harithakarmasena of 335 GPs, 46 municipalities and 2 Municipal corporations. After conducting an evaluation of the performance of these agencies the number of agencies is now reduced. Only 32 proactive agencies who are found successful in delivering their duties are onboard now. These HSS are identified and enlisted through

due process jointly by Harithakeralam Mission & Suchitwa Mission. Capacity building of HKS members and institutionalizing the system are the prime tasks of Harithasahayasthanam.

They are responsible for developing appropriate business models in each LSGIs and build capacity of HKS to run the system as per the ideal business-model. They can also explore the scope identifying suitable micro enterprises that can be run by HKS groups in order to make them sustainable. The services of HSS were very crucial in attaining Suchitwa Padavi for more than 700 LSGIs.



## 2.3 Resource Recovery and Recycling

### 2.3.1 Material Collection Facilities

MCFs are a storage facility for collecting and storing inorganic wastes collected by Harithakarmasena before they are sorted or classified. For facilitating secondary segregation of dry waste collected by Harithakarmasena through door-to-door

collection, 994 Material collection facilities are established under various LSGIs in the state. This would be enough to cater the need of managing 80 percentage of the segregated dry-waste generated in the state.





### Material Collection Facility as on 31-05-2021

Sl No.	District	Grama panchayaths				Municipalities				Corporations			
		Total no. of Grama panchayaths	Total No. of MCF's required	Total No. of MCF's Functional	Percentage	Total no. of Municipalities	Total No. of MCF's required	Total No. of MCF's Functional	Percentage	Total no. of Corporations	Total No. of MCF's required	Total No. of MCF's Functional	Percentage
1	Thiruvananthapuram	73	73	69	94.52	4	8	5	62.5	1	10	6	60
2	Kollam	68	68	74	108.8	4	8	4	50	1	10	1	10
3	Pathanamthitta	53	53	54	101.9	4	8	5	62.5	0	0	0	0
4	Alappuzha	72	72	65	90.28	6	12	24	200	0	0	0	0
5	Kottayam	71	71	71	100	6	12	10	83.33	0	0	0	0
6	Idukki	52	52	52	100	2	4	3	75	0	0	0	0
7	Ernakulam	82	82	56	68.29	13	23	21	91.3	1	10	5	50
8	Thrissur	86	86	75	87.21	7	10	9	90	1	10	7	70
9	Palakkad	88	88	85	96.59	7	14	7	50	0	0	0	0
10	Malappuram	94	94	66	70.21	12	24	12	50	0	0	0	0
11	Kozhikode	70	70	51	72.86	7	12	7	58.33	1	10	1	10
12	Wayanad	23	23	24	104.4	3	6	3	50	0	0	0	0
13	Kannur	71	71	72	101.4	9	14	11	78.57	1	10	2	20
14	Kasargode	38	38	33	86.84	3	6	4	66.67	0	0	0	0
<b>Total</b>		<b>941</b>	<b>941</b>	<b>847</b>	<b>90.01</b>	<b>87</b>	<b>161</b>	<b>125</b>	<b>77.64</b>	<b>6</b>	<b>60</b>	<b>22</b>	<b>36.7</b>

### 2.3.2 Resource Recovery Facilities

The segregated waste then is transported to Resource Recovery Facilities where the materials are shredded or baled. The shredded plastics are used for the road tarring and the baled plastics are used for recycling and making new products. So far 169 RRFs started functioning at various LSGIs in the state. Apart from the plastic shredding units established along with the RRF, there are 97 stand-alone plastic shredding units at various LSGIs.

The services of Clean Kerala Company and other service providers are being used for establishing Plastic Shredding Units. The Clean Kerala Company is being provided with a Viability Gap Fund for operating the RRF being established.

It is envisaged to have atleast one MCF in each ward of a Local Self Government Institutions (LSGI), i.e., the gram panchayat or municipality and atleast one RRF in each Block Panchayat and Municipality.



**Details of RRF started functioning at  
Grama Panchayats, Block Panchayats, Municipalities  
and Corporations in each District**

**Resource Recovery Facility as on 31/05/2021**

Sl No.	District	Grama panchayaths		Block Panchayaths				Municipalities				Corporations			
		Total no. of Grama panchayaths	Total No. of RRF's Functional	Total No. of Block Panchayaths	Total No. of RRF's required	Total No. of RRF's Functional	Percentage	Total no. of Municipalities	Total No. of RRF's required	Total No. of RRF's Functional	Percentage	Total no. of Corporations	Total No. of RRF's required	Total No. of RRF's Functional	Percentage
1	Thiruvananthapuram	73	1	11	11	6	54.55	4	4	3	75	1	4	2	50
2	Kollam	68	9	11	11	2	18.18	4	4	4	100	1	4	1	25
3	Pathanamthitta	53	3	8	8	4	50	4	4	4	100	0	0	0	0
4	Alappuzha	72	4	12	12	3	25	6	6	5	83.33	0	0	0	0
5	Kottayam	71	3	11	11	7	63.64	6	6	6	100	0	0	0	0
6	Idukki	52	3	8	8	2	25	2	2	2	100	0	0	0	0
7	Ernakulam	82	6	14	14	1	7.14	13	13	7	53.85	1	4	2	50
8	Thrissur	86	12	16	16	8	50	7	7	7	100	1	4	2	50
9	Palakkad	88	5	13	13	4	30.77	7	7	6	85.71	0	0	0	0
10	Malappuram	94	3	15	15	2	13.33	12	12	2	16.67	0	0	0	0
11	Kozhikode	70	1	12	12	4	33.33	7	7	1	14.29	1	4	1	25
12	Wayanad	23	4	4	4	0	0	3	3	0	0	0	0	0	0
13	Kannur	71	3	11	11	8	72.73	9	9	7	77.78	1	4	1	25
14	Kasargode	38	0	6	6	3	50	3	3	3	100	0	0	0	0
<b>Total</b>		<b>941</b>	<b>57</b>	<b>152</b>	<b>152</b>	<b>54</b>	<b>35.5</b>	<b>87</b>	<b>87</b>	<b>57</b>	<b>65.5</b>	<b>6</b>	<b>24</b>	<b>9</b>	<b>38</b>

## 2.4 Suchitwa Padavi

Based on the predetermined parameters, more than 700 LSGIs attained Suchitwa Padavi.

The monitoring parameters are fixed by Harithakeralam Mission and Suchitwa Mission jointly in consultation with Local Self-Government

Department. Evaluation teams are formed at district level and they visited LSGIs for evaluating the progress achieved against the sanitation parameters.



## Declaration of Suchitwa Padavi

On October 10, Hon'ble Chief Minister Shri Pinarayi Vijayan announced the hygiene status of 591 Local Governments in the state. 534 Grama Panchayats and 57 Municipal Corporations including Thiruvananthapuram Corporation are eligible for the sanitation status. As part of the State Government's 12-day program, it was announced that 500 grama panchayats and 50 municipalities would be given sanitation status. Work in this direction has been carried out in 567 Gram Panchayats and 57 Municipal Corporations. In the wake of Covid - 19, the local bodies have taken steps to bring sanitation to a standstill despite the disruptions.

As a result of the coordinated efforts of the Local Self Government Institutions in collaboration with Haritha Kerala Mission, Sanitation Mission, Employment Guarantee Mission, Ayyankali Employment Guarantee Scheme, Kudumbasree Mission and Clean Kerala Company, solid waste management systems have been set up in 500 Grama Panchayats and 20 Block Panchayats for sanitation status. Sanitation status is given to the Gram Panchayats and Municipal Councils which have fully prepared the infrastructure for bio-inorganic waste treatment, are in the forefront of door-to-door collection and treatment activities, are effectively carrying out the activities of the Haritha Karma Sena and have installed public toilets and latrines in all households.

Attaining Suchitwa Padavi by 789 LSGIs shows the remarkable progress of LSGIs since 2016, where proper waste management system was available only in a few gram panchayats like Chembilode,

Kathirur in Kannur district, Eraviperur in Pathanamthitta district and some municipalities like Attingal, North Paravur, Chittoor-Thathamangalam etc. Now, Harithakarmasena operates in 857 Grama Panchayats and 92 municipalities including 5 Municipal Corporations in the state.

The next step is to bring the waste treatment facilities to 100 per cent and to provide complete sanitation facilities by treating other wastes such as liquid waste, toilet waste, building waste, meat, hair waste and sanitary waste. Local Governments have been able to strengthen waste and bio-waste collection, enable recyclability and utilize road tarring. Local governments have been able to implement the Green Protocol, control the consumption of single-use plastics and raise public awareness.

In addition, steps have been taken to treat bio-waste at source. 12,684 tonnes of organic manure produced annually by the local bodies: Atigreen, Karshakamitra, Jaivasree, Enviro Green, Krishimithram, Samatha Green, Karshakamritham, Haritam, Nattupachcha, Amritakam, Samridhi, Vermi compost, Survival, Sanitation, Compost, Jivo. , Nirmal compost brands produced by LSGIs. Thus, efforts are being made to bring all the local bodies in the state to the level of hygiene and to the level of complete hygiene.

### Suchitwa Padavi Status

Sl. No.	Name of the District	No of Suchitwa padavi LSGs(including BPs) revisited and inspected				No of LSGs(including BPs) where the padavi standards have improved				No of LSGs(including BPs) where padavi status continues unchanged				No of LSGs(including BPs) where the padavi standards have fallen							
		GP	Municipality	Corporation	BP	Total	GP	Municipality	Corporation	BP	Total	GP	Municipality	Corporation	BP	Total	GP	Municipality	Corporation	BP	Total
1	Thiruvananthapuram	67	4	1	7	79	36	2	1	2	41	19	2	0	5	26	12	0	0	0	12
2	Kollam	30	0	0	0	30	0	0	0	0	0	30	0	0	0	30	0	0	0	0	0
3	Pathanamthitta	35	2	0	2	39	9	2	0	0	11	26	0	0	2	28	0	0	0	0	0
4	Alappuzha	57	6	0	2	65	33	5	0	2	40	24	1	0	0	25	0	0	0	0	0
5	Kottayam	69	6	0	7	82	16	0	0	0	16	53	6	0	7	66	0	0	0	0	0
6	Idukki	30	2	0	1	33	6	1	0	0	7	24	1	0	1	26	0	0	0	0	0
7	Ernakulam	44	9	0	1	54	30	5	0	1	36	11	2	0	0	13	3	2	0	0	5
8	Thrissur	46	2	0	4	52	33	7	0	0	40	0	0	0	4	4	13	0	0	0	13
9	Palakkad	64	7	0	1	72	30	1	0	1	32	3	1	0	0	4	0	0	0	0	0
10	Malappuram	56	10	0	1	67	52	10	0	1	63	0	0	0	0	0	4	0	0	0	4
11	Kozhikode	39	5	1	2	47	14	0	0	2	16	25	5	1	0	31	0	0	0	0	0
12	Wayanad	16	1	0	1	18	14	1	0	1	16	2	0	0	0	2	0	0	0	0	0
13	Kannur	66	7	0	2	75	13	0	0	0	13	53	7	0	2	62	0	0	0	0	0
14	Kasargode	26	2	0	0	28	5	1	0	0	6	21	1	0	0	22	0	0	0	0	0
<b>Total</b>		<b>645</b>	<b>63</b>	<b>2</b>	<b>31</b>	<b>741</b>	<b>291</b>	<b>35</b>	<b>1</b>	<b>10</b>	<b>337</b>	<b>291</b>	<b>26</b>	<b>1</b>	<b>21</b>	<b>339</b>	<b>32</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>34</b>

## 2.5 Green Office Campaign

As part of compliance with the Green Protocol in the State, steps have been taken to convert 10,000 Government Offices in the State into Green Offices. The campaign lasted for about a month as part of the Green Office campaign. District level teams conducted inspections and selected the green

offices on the basis of their report. On January 26, 2021, the Hon'ble Chief Minister Shri Pinarayi Vijayan announced the Green Office. 11510 offices across the state became green offices.

### Green Office Declaration

Sl. No	Name of District	Total no. of Govt. offices in the district	Total no. of Govt. offices in the district where Green auditing done	Total no. of Govt. offices in the district who passed the Green auditing successfully	Total no. of Govt. offices in the District who received A grade	Total no. of Govt. offices in the District who received B grade	Total no. of Govt. offices in the District who received C grade	Total no. of Govt. offices in the District which were issued certificate
1	Thiruvananthapuram	2417	1350	1016	337	357	322	0
2	Kollam	1383	1293	894	261	291	342	823
3	Pathanamthitta	639	629	453	115	191	147	0
4	Alappuzha	1294	1080	865	273	272	320	23
5	Kottayam	1286	1092	900	255	347	298	0
6	Idukki	713	719	634	259	203	172	0
7	Ernakulam	1243	1052	1019	413	368	238	146
8	Thrissur	1290	1155	915	322	274	319	293
9	Palakkad	1861	1554	1169	287	471	411	5
10	Malappuram	1362	1209	912	204	337	371	114
11	Kozhikode	1621	933	727	236	269	222	0
12	Wayanad	448	418	316	74	118	124	0
13	Kannur	2318	1892	1242	347	445	450	97
14	Kasargod	579	548	448	124	125	199	0
<b>Total</b>		<b>18454</b>	<b>14924</b>	<b>11510</b>	<b>3507</b>	<b>4068</b>	<b>3935</b>	<b>1501</b>

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TAKE A  
BREAK  
2020-21

## 2.6 Take a Break

God's Own country is on its way to materialize this tag in sanitation sector by setting new standards in hygiene and safety standards for public toilets. Take a Break refreshment facilities and toilet complexes came-up alongside the national and state highways, Transport stations, shopping complexes etc. to address the issue of shortage of quality public toilets in the state. 'Take a Break' is initially declared as part of Chief Minister's Twelve-program initiative and the present 100 TaBs comes part of the Chief-minister's 100 days program.

Dearth of high-quality public toilets has been causing difficulties for people, especially travelers and commuters. Women and children are severely suffering due to this situation while travelling by road. Take a Break refreshment facilities and toilet complexes are envisioned by the state government to make available high quality refreshment facilities to these vulnerable section. Safety, well-upkeep and maintaining cleanliness standards would be off high priority in TABs. Coffee shops, and rest-area are also part of some of the TABs. Napkin vending-machines, napkin-destroyers, waste-bins, cleaning agents and utensils would be provided at TABs.

It is planned to have 2365 TABs across the state in a phased manner by way of constructing minimum 2 high quality toilets in Grama Panchayats, 5 in Municipality and 8 in Municipal Corporations. A total of 100 TABs were inaugurated in the last year

and another 100 are now being inaugurating. So-far local bodies in the state have taken-up 1213 TAB projects and tendering procedures of 1063 are completed. Construction of 524 TABs have already initiated. Out of this 165 TABs are high-quality modern toilets which comes under premium category.

There are 3 categories (Basic, Standard and Premium) of toilets including those which are of renovated from their run-down stage. Premium level TAB would be having sophisticated facilities and services like snack-bars and coffee-shops. The upkeep and maintenance of the TABs are the responsibilities of Local bodies and for this agencies may be engaged or the service of Kudumbashree Units may be utilized.

Through the project the state is also expecting to solve the long pending demand for public sanitation facilities by tourists and commuters. This would be an added advantage to the tourism industry in the state also. I guess, this would be a land mark achievement in the development sector of the state by solving a long-pending issue of inadequacy in public sanitation facilities. The role of LSGIs, its officials and elected representatives is commendable in achieving this fete.





## 4. Swachh Bharat Mission (Gramin)

SBM (G) has been uniquely designed to leverage the capacity of individuals and communities in rural India to create a people's movement to ensure that the ODF status of rural areas is sustained, people continue to practice safe hygienic behavior and that all villages have proper solid and liquid waste management arrangements.

SBM(G) Phase II has been implementing from 2020-21 to 2024-25 in mission mode with a total estimated outlay of Rs.1500 crores in the state of Kerala. Unlike previous phase the second phase is a novel model of convergence between different verticals of financing and various schemes of central and state governments. Apart from budgetary allocations from DDWs and the corresponding State share, remaining funds will be dovetailed from 15th Finance commission grants to GPs, MGNREGS, and revenue generation models.

Having declared as ODF State, Kerala is now focusing on ODF Sustainability and ODF+ activities. The state is targeting to make its 100% of villages meeting ODF+ status by March 2022. An ODF + village is defined as a village which sustain its Open Defecation Free status, ensures solid and liquid waste management and is visually clean.

During the year a total sum of Rs.8.29Crore has been expended on 106 Solid and Liquid Waste Management projects across the State which includes 30 Sanitary Complexes / Public Toilets and various IEC / Capacity Buildings activities for ODF Sustainability worth Rs.1.38crore has been carried-out under SBM (G) towards 356 IEC/Capacity activities.

So far, a total sum of Rs.28.33 Crore has been expended on 8165 Solid and Liquid Waste Management projects across the State. 46 Sanitary Complexes / Public Toilets have been constructed for which Rs.91.17 lakh has been expended till date as part of Community Sanitary Complexes/ Public Toilets components. Various IEC / Capacity Buildings activities for ODF Sustainability have been undertaken during the year. Rs.2.88 crore has been expended under SBM (G) towards IEC/Capacity activities.

## SBM (G) Expenditure during the Mission Period

### SBM (G) Funds Received & Expenditure

Year	Funds Received (Lakh)	Interest Received (Lakh)	Total Fund Available (Lakh)	Expenditure (Lakh)	% of Expenditure
2014-15	5023	387		5276	
2015-16	3873	291		4712	
2016-17	16375	495		15846	
2017-18	16337	365		14078	
2018-19	2078	250		3145	
2019-20	0	196		1486	
2020-2021	452.67	175.65	1821.51	829.20	
<b>Total</b>	<b>44138.67</b>	<b>2159.65</b>	<b>46298.32</b>	<b>45372.2</b>	<b>97.99</b>

#### 4.1. Solid and Liquid Waste Management under SBM (G)

Swachh Bharat Mission (Grameen) Phase 2 is currently being implemented. Solid and liquid waste treatment is one of the major missions of Swachh Bharat Mission Grameen. This must lead to the setting up of systems for scientific disposal of waste in such a way that has a tangible impact on the population. The Community /Gram panchayat has to be motivated to come forward, demand such a system, and subsequently operate and maintain. States are to decide the technologies suitable to their areas. Technologies identified by the Committee on technologies may also be considered for implementation. Collection, segregation and safe disposal of household garbage, decentralized systems like household composting and biogas plants shall be permitted. Activities related to maximum reuse of organic solid waste as manure should be adopted.

In the first phase of SBM(G) the total assistance under for SLWM projects was worked out on the basis of total number of households in each GP, subject to a maximum of Rs.20 lakh for GPs having more than 500 households. Funding for SLWM project under SBM(G) is provided by the Central and State Government in the ratio of 60:40. The first phase of SBM (G) came to an end during the last year and the projects taken in the first phase are nearing completion. Now GPs have taken projects under the second phase.



### Details of SWM projects taken-up in Districts under SBM (G)

Districts	No. Of GPs undertook Projects	Total No. of Projects	Total Project Cost	Expenditure till 19-20	% of Exp.	No. of Projects undertook during 20-21	Expenditure during 20-21	Expenditure till date	% of Exp.
Trivandrum	72	215	284204618	38089781	13.4				0.0
Kollam	68	179	81025615	11607167	14.3	105	3994419	15601586	19.3
Pathanamthitta	53	97	59660505	31023462	52.0	22	11704441	42727904	71.6
Alapuzha	23	20	39265193	8665108	22.1	35	10298421	18963529	48.3
Kottayam	60	171	103659205	34098948	32.9	28	7629625	41728573	40.3
Idukky	52	71	50785557	20371092	40.1	35	19729548	40100640	79.0
Ernakulam	40	61	22812279	18876037	82.7	32	875000	19751037	86.6
Thrissur	60	79	55113376	16532009	30.0	27	9560132	26092141	47.3
Palakkad	87	216	146453688	52388402	35.8	105	20910829	73299231	50.0
Malapuram	94	211	87970617	15774923	17.9	581	59941846	75716769	86.1
Kozhikode	70	74	59303098	21076390	35.5	126	16530350	37606740	63.4
Wayanad	23	80	47140662	4223525	9.0	21	10279661	14503186	30.8
Kannur	3	3	2750000	2750000	100.0	4	3762535	3762535	136.8
Kasarigode	11	11	12553393	8493764	67.7	8	4412528	12906292	102.8
<b>Total</b>	<b>716</b>	<b>1488</b>	<b>1052697806</b>	<b>283970608.6</b>	<b>27.0</b>	<b>1129</b>	<b>179629335.4</b>	<b>422760163</b>	<b>40.2</b>

## 4.2 Individual Household latrines under SBM (G)

The Mission aims to ensure that all rural families have access to safe toilets and therefore safe technology options are an important component of toilet choice. A duly completed household sanitary latrine unit shall comprise of i) a sanitary substructure (that safely confines human faces and eliminates the need for human handling before it is fully decomposed), ii) a super structure with water facility, and iii) a hand wash unit for cleaning and hand-washing.

The incentive amount provided under SBM (G) to Below Poverty Line (BPL) /identified APL households shall be up to Rs12000 for construction of one unit of IHHL and to provide for water availability including storage for hand-washing and cleaning of the toilet. The aim of the incentive is not to provide the full cost of the toilet but to facilitate a positive change in behavior for people to undertake construction of toilet on their own. Central Share of this incentive for IHHLs from Swachh Bharat Mission (Gramin) shall be Rs.7,200 (60%) and the State share will be Rs.4,800 (40%)

### Details of IHHL projects taken-up by Districts under SBM (G)

Districts	No. Of GPs undertook Projects	Total No. of IHHL Constructed	Total Project Cost	Expenditure till 19-20	% of expenditure	No.of Projects undertook during 20-21	Expenditure during 20-21	Expenditure till date
Trivandrum	37	842	12966800	12966800	100.0	367	102000	720000
Kollam	10	187	3000000	2244000	74.8	227	2730000	2730000
Pathanamthitta	50	887	13659800	13659800	100.0	414	4968000	18627800
Alapuzha	49	922	11064000	5148000	46.5	655	1296000	6444000
Kottayam	0	0	0	0	0.0	6	996000	
Idukky	36	216	4200000	2592000	61.7	245	2940000	2940000
Ernakulam	52	52	4789750	4004800	83.6	820	4200000	4200000
Thrissur	32	303	4666200	3756000	80.5	344	4128000	4128000
Palakkad	34	553	8516200	6636000	77.9			
Malapuram	17	93	5200000	4282180	82.3	250	0	4282180
Kozhikode	70	92	3942400	1572000	40.0	37	1440000	3012000
Wayanad	1	13	156000	156000	100.0	0	0	156000
Kannur	31	773	11904200	9172500	77.1	643	120000	7716000
Kasargode	13	260	3120000	3120000	100.0	167	0	3120000
<b>Total</b>	<b>432</b>	<b>5193</b>	<b>87185350</b>	<b>69310080</b>	<b>79.5</b>	<b>4175</b>	<b>22920000</b>	<b>58075980</b>

### 4.3 Details of Community Sanitary Complexes (CSC) projects taken-up by LSGIs in each Districts under SBM (G)

It is made mandatory by Swachh Bharat Mission (G) that ODF + villages with more than 100 households must have at least one CSC which may cater to the sanitation needs of floating/migrant population. While identifying the locations, priority should be given to the locations with predominant SC/ST habitations, poorest of poor in the village and/or those visited by migrant labourers, floating population etc.

Community Sanitary Complexes comprising of an appropriate number of toilet seats, bathing cubicles, washing platforms, wash basins, etc. can be set up in the village at a location acceptable and accessible to all. Such Complexes can be developed at public places, markets, bus stands, etc., where large scale congregation of people takes place.

The maximum support per unit prescribed for a Community Sanitary Complex is Rs.2 lakh. Sharing pattern amongst Central Government, State Government and the Community shall be in the ratio of 60:30:10. The Community contribution, however, can be made by the Panchayat out of its own resources. The Funds for previous phase has been still utilized by the GPs for the implementation of projects of Community Sanitary Complexes.

**Details of CSC projects taken-up by Districts under SBM (G)**

Districts	No. of GPs undertook Projects	Total No. of CSC Constructed	Total Project Cost	Expenditure till 19-20	% of Expenditure	No. of Projects undertook during 20-21	Expenditure during 20-21	Expenditure till date
Trivandrum	23	12	9399664	6267097	66.7			
Kollam	2	2	800000	753480	94.2	1	141330	141330
Pathanamthitta	34	29	17635902	13867299	78.6	4	1040000	14907299
Alapuzha	2	2	380000	370266	97.4	4	836000	1206266
Kottayam	6	18	3600000	3053352	84.8	11	15044100	18097452
Idukky	14	10	11190000	4873704	43.6	12	3629702	8503406
Ernakulam	23	77	19225971	15605516	81.2	8	3456760	3456760
Thrissur	37	15	21005040	5362617	25.5	7	2424118	7786735
Palakkad	20	28	13307454	7508833	56.4	9	3298277	10807110
Malapuram	24	41	11633251	6106589	52.5	45	420000	6526589
Kozhikode	30	27	36936784	10453809	28.3	17	16907549	27361358
Wayanad	7	10	1830000	1694273	92.6	27	6009300	7703573
Kannur	2	5	986000	860642	87.3	27	4271878	4649002
Kasargode	2	2	795000	742847	93.4	33	719236	1462083
<b>Total</b>	<b>226</b>	<b>278</b>	<b>148725066</b>	<b>77520324</b>	<b>52.1</b>	<b>205</b>	<b>58198250</b>	<b>112608963</b>



#### 4.4 ODF Plus

Sanitation in villages will not be complete unless open defecation is avoided. That is why the government is taking the initiative to build toilets and public toilets in every household and community level in the villages. All the Grama-panchayats in Kerala have declared ODF in 2016 and now Grama-panchayats has to achieve ODF Plus status by meeting all the criteria set by Department of Drinking water and Sanitation. All the residents should have access to toilets, proper usage of toilets, Scientific management of solid and liquid waste, public sanitation facilities etc. are the components of ODF Plus. The Grama-panchayats will be able to achieve ODF Plus status only if they could make necessary arrangements for liquid waste management facilities effectively. Black-

water discharge from constructed toilets are not be allowed to enter open spaces, water sources or other water bodies or to contaminate surface water. Septic-tanks, twin-pits are the suggested solution for managing black-water and Grey-water should be treated through sock-pits/ leach-pits.

It is targeted to achieve ODF plus status for all GPs by the end of 2021 in a phased manner. Almost 200 GPs will achieve the status by mid-2021 and remaining by December, 2021.



## 5. Performance Based Incentive Grant

State received Rs. 200.4 Crore towards Performance Based Incentive Grant, being 100% Central grant. Rs.56.46 Crore has been distributed among 14 districts based on the number of households in each GP for undertaking various SLWM activities in GPs as per the guidelines. It is initiated to meet retrofitting expenses of toilets up to Rs.5,000/ per toilet for IHHL constructed under SBM (G) on the basis of the valuation certificate of

concerned Grama Panchayat Overseer, including for the toilets damaged during flood. The progress of implementation has been monitored and project has been conceived/ implemented for about Rs.30 Crore. Apart from the 17278 nos. of retrofitting, 3051 of new IHHL and 344 nos. of school toilets are under various stages of construction. The details are as given under

### The Expenditure Details of PBIG is Given Under

Sl. No.	District	Total No. of GPs	Total PBIG Allocation (Rs.) Lakhs	Expenditure	Balance with State / Districts
	State Headquarters		718	475.57	242.43
1	Thiruvananthapuram	73	2,769.13	2,769.13	0
2	Kollam	68	2,589.03	2,589.03	0
3	Pathanamthitta	53	1,439.08	1,439.08	0
4	Alappuzha	72	2,003.43	2,003.43	0
5	Kottayam	71	1,984.05	1,981.06	2.99
6	Idukki	52	1,359.86	1,345.85	14.01
7	Ernakulam	82	2,438.64	2,438.64	0
8	Thrissur	86	2,580.63	2,580.27	0.36
9	Palakkad	88	2,867.03	2,867.02	0
10	Malappuram	94	3,341.11	3,341.11	0
11	Kozhikode	70	2,176.70	2,167.65	9.05
12	Wayanad	23	821.58	821.58	0
13	Kannur	71	1,913.33	1,913.33	0
14	Kasargod	38	1,277.05	1,265.21	11.84
	<b>Total</b>	<b>941</b>	<b>30,278.65</b>	<b>29,997.96</b>	<b>280.68</b>

## 5.1 Details of IHHL projects taken-up by Districts under SBM (G) PBIG

### Details of IHHL projects taken-up by Districts under SBM (G) PBIG

Districts	No. Of GPs undertook Projects	Total No. of IHHL Constructed	Total Project Cost	Expenditure till 19 -20	% of Expenditure	No. of Projects undertook during 20-21	Expenditure during 20-21	Expenditure till date
Kollam	5	25	800000	385000	48.1	36	5232000	5617000
Pathanamthitta	53	57	3110800	689120	22.2	511	6132000	6821120
Alapuzha	22	691	8292000	1632280	19.7	1197	11612000	13244280
Kottayam	71	761	9132000	7757600	84.9	117	17594154	25351754
Idukky	6	102	1349528	822200	60.9	486	5259766	6081966
Ernakulam	23	281	3372000	2861444	84.9	350	4200000	6312000
Thrissur	32	303	4666200	37560000	0.0	835	10021800	10021800
Palakkad	48	618	23500400	7394701	31.5	1821	28056360	35451061
Malapuram	42	515	2500000	2443240	97.7	94	15557440	18000680
Kozhikode	12	146	4912600	1752000	35.7	31	1452000	3204000
Wayanad	1	3	144000	36000	25.0	225	1452000	1488000
Kannur	26	113	1356000	813600	60.0	1251	14463611	14649011
Kasargode	4	18	444000	216000	48.6	245	2280000	2496000

## 6. GOBAR-DHAN

### (Galvanizing Organic Bio-Agro Resources DHAN) Scheme

Gobardhan is an integral component of SBM (G) which is intended to manage bio-waste including animal waste, kitchen left overs, crop residue and market waste into biogas. Until last year 21 projects of Gobardhan-biogas plants were initiated in the state out of which 12 are completed. In addition to this, another 40 projects are envisaged during 20-21 and project formulation for these projects are

initiated. The estimated cost of these 40 projects under the scheme is Rs.44676172 and this would translate to the processing of almost 12 tonnes of biodegradable waste once the projects are completed.



### 6.1 Details of Projects taken-up in each district under GOBAR DHAN

Sl. No.	Name of District	Site Identified	Proposed / under construction / remarks	Model (Cluster/ Community/ Commercial (BG))	Whether Gausshala based	Capacity of the plant	Estimated cost	Status as on 31.07.2021
1	Thiruvananthapuram	Vithura Jersey Farm	Dt. Panchayat to prepare project - rough cost estimate prepared	Community	No	1 Ton	5000000	Agency to be selected
		Aryanaad Market	Under construction	Community	No	500 Kg	2300000	Non-SBM fund, Nearing completion, Plan fund
2	Kollam	Bharanikkavu Tsunami Colony	Under Construction	Community	No	7m3	1000000	SBM fund, Under constn
3	Pathanamthitta	Police AR Camp, Vadakkedathukavu Erath Grama Panchayat	DPR Prepared, Send for TS	Institutional	No	500 Kg/day	2000000	SEUF, DPR under prepn
4	Alappuzha	Amablappuzha Sreekrishna Swami Temple, Cow Farm	Proposal send to Travancore Devaswom Board Dt. Panchayat Project Taken	Gausshala (65 cows)	Yes		4000000	IRTC, Estimate taken
		KSDP, Kalavoor	Dt. Panchayat Project Taken	Institutional	No		248000	IRTC, Estimate taken
5	Kottayam	Janakeeya Bhakshna Sala	Dt. Panchayat Project Taken	Institutional	No		240000	IRTC, Estimate taken
		Kuravilangad Gramapanchayath, Fish & Meat Market (near Bus Stand)	DPR Prepared	Community	No	500kg/ day	17,40, 000	Agreement executed with IRTC. Work yet to start
6	Idukki	Kerala Veterinary University Base Farm , Vagamon, Elappara GP	DPR Prepared	Community		1000KG	2500000	Estimate taken by IRTC
		KLDB Modern Bull Mother farm, Vagamon, Elappara GP	DPR Prepared	Community		1000KG	2500000	

7	Ernakulam	Market, Puthenvelikkara	Dt. Panchayat to take project	Community	No	50KG	250000	Estimate taken
		Manjalo GP		Community	No	250KG	1500000	Project yet to approve
8	Thrissur	District Seed Farm, Pazhayannur	Dropped	Community				
		District Seed Farm, Pananchery	Dropped	Community				
		Cattle breeding farm, Thumboomuzhi	Proposed	Community	Yes	2500 KG	7500000	
9	Palakkad	Vaniyamkulam Market	Dt. Panchayat to take project	Community			2050000	Estimate taken by IRTC.
		Thiruvizhamkundu Cattle farm	AH Dept.	Community				Project yet to be placed
10	Malappuram	Ozhur GP	DPR Prepared	Community		15M3	2000000	Agreement to be executed
		Moorkanad	DPR Prepared	Gaushala	Yes	500Kg/day	3000000	Project to be placed
11	Kozhikode	Dt. Seed farm, Koothaly	DPR under preparation	Community		300kg		
		State Seed farm, Puthupady	DPR under preparation	Community				IRTC
11	Kozhikode	State Seed farm, Perampira	DPR under preparation	Community		50kg		
		Market, Kodenchery	DPR Prepared	Community		50 Kg	278623	
		Vallapatta Colony	DPR Prepared	Community		100 Kg/day	445000	
12	Wayanad	KVAS University, Pookode	DPR under preparation	Community				
		Valavayal Colony	DPR Prepared	Community		100 Kg/day	490000	

13	Kannur	Alakkode Panchayat Market	Under preparation	Community			1000000	IRTC
		Cheruthazam Panchayat Market	Under preparation	Community			1000000	IRTC
14	Kasaragod	Near Govt. Vocational Higher Secondary School, Madikai	Dropped	Institutional	No	150 kg	430000	
14	Kasaragod	Open Jail, Cheemeni, Kayur Cheemeni GP	DPC approved	Institutional	Yes	250 Kg	1179809	
			DPC approved	Institutional	Yes	50 Kg	397841	
			DPC approved	Institutional	Yes	50 Kg	397841	
		Bela Cow Farm, Badiadka GP	DPC approved	Institutional	Yes	100 Kg	573573	
		Govt. Medical College, Ukkinadukkam, Badiadka GP	DPC approved	Institutional	No	100 Kg	609586	
		Old Age Home, Paravanadukkam, Chernad GP	DPC approved	Institutional	No	50 Kg	389236	
		Govt. Observation Home for boys, Paravanadukkam, Chernad GP	DPC approved	Institutional	No	50 Kg	389236	
		Women and Children Home, Chayyom, Kinanur Kamthalam GP	DPC approved	Institutional	No	50 Kg	397841	
		Modern Residential School, Vellachal, Piliicode GP	DPC approved	Institutional	No	100 Kg	609586	

## 7. Swachh Bharat Mission (Urban)

The Swachh Bharat Mission emanates from the vision for ensuring hygiene, waste management and sanitation across the nation. Its objectives are Elimination of open defecation, eradication of manual scavenging, scientific solid waste management, and bring-in behavior change regarding healthy sanitation practices.

The project has 5 components namely Individual Household latrines, Public Toilets, Solid Waste management, Office Expenses and Capacity Building, Information Education and Communication activities. The progress of each component is given hereunder.

### Mission Allocation and expenditure

#### SBM (U) Funds Received & Expenditure (Lakh)

Year	Funds Received (Lakh)	Total Fund Available (Lakh)	Expenditure (Lakh)	% of Expenditure
2015-16	2557.67	14742.56	1918.48	75.35
2016-17	3258		1009	
2017-18	0		294.39	
2018-19	5158.75		4413.25	
2019-20	3768.14		564.12	
2020-21	0		2909.87	
<b>Total</b>	<b>14742.56</b>		<b>14742.56</b>	

#### SBM (U) Funds Received & (Lakh) Component wise Expenditure

Year	IHHL			IEC			CB & OA		
	IHHL Fund Received	Exp.	% of Exp.	Fund Received	Exp.	% of Exp.	Fund Received	Exp.	% of Exp.
2015-16	2224	1705.43	66.53	267	201	98.50	66.67	11.85	100.1
2016-17	1998	667.93		1260	292		0	48.92	
2017-18	0	0		0	287.79		0	6.6	
2018-19	0	344.99		0	182.38		160	147.88	
2019-20	0	0		0	392		160	172.12	
2020-21	0	90.74		0	149.02		0		
<b>Total</b>	<b>4222</b>	<b>2809.09</b>		<b>1527</b>	<b>1504.19</b>		<b>386.67</b>	<b>387.37</b>	

## 7.1 Individual Household Latrines

SBM (Urban) aims to ensure that a) No households engage in the practice of open defecation: b) No new insanitary toilets are constructed during the mission period, and c) all pit latrines are converted to sanitary latrines. Central government incentive for the construction of household toilets is Rs. 4,000 per household toilet for each identified beneficiary household, in states. States will contribute a minimum of Rs 2,667 per IHHL towards individual toilets to matching Central Share of Rs 4,000 per IHHL.

The IHHL construction in the state has been completed totally against the target of 29578 IHHLs. 92 ULBs got ODF certificates from Quality Council of India. 413 new beneficiaries are identified for IHHL during 2020-21 and projects worth Rs 11898649 have been formulated and more than 50% of the target is achieved during the period. 30 ULBs including Kochi, Kollam, Kozhikode & Trivandrum Corporation got ODF+ Certification.

### Details of IHHL projects taken-up by Districts under SBM (U)

Districts	No. Of ULBs undertook Projects	Total No. of IHHL Constructed	Total Project Cost	Expenditure during 19-20
Pathanamthitta	1	0	3110800	0
Kottayam	1	150	4004000	2310000
Idukky	1	45	980049	300015
Ernakulam	2	2	477400	0
Thrissur	4	216	3326400	2847822
<b>Total</b>	<b>9</b>	<b>413</b>	<b>11898649</b>	<b>5457837</b>





## 7.2 Public Toilet

Central government incentive for the construction of public toilets and urinals will be in the form of 40% Grant/VGF, for each toilet block constructed. The base unit cost of PTs will be calculated at Rs 98000 per seat, wherein the VGF/Grant will be Rs 39,200 per seat. For urinals, base unit cost of urinals will be calculated at Rs 32000 per seat, wherein the VGF/ Grant will be

Rs 12,800 per seat). States will contribute a minimum of Rs 26,134 per seat towards public toilet projects to match Central Share of Rs 39,200 per seat.

The revised target set under the scheme SBM (U) for the construction of Public Toilet seats in the state is 1338. Construction of 585 toilet-seats are completed and the remaining are progressing.

### Details of Public Toilet projects taken-up by Districts under SBM (U)

Districts	No. Of ULBs undertook Projects till 19-20	Total No. of PT Seats	Total Project Cost	Expenditure till 19-20	No. of Projects undertook during 20-21	Expenditure during 20-21
Trivandrum	5	18	14055692	4260112	0	0
Kollam	5	25	4950000	3984650	2	434709
Pathanamthitta	4	70	6860000	0	0	0
Alapuzha	6	94	13111047	5177707	4	0
Kottayam	5	95	9292002	0	1	2352000
Idukky	2	69	4508046	1703373	0	0
Ernakulam	10	145	20588497	3131470	1	454674
Thrissur	4	57	6895344	1176000	1	339130
Palakkad	6	105	22844822	2861354	2	3175045
Malapuram	12	261	28021297	2996390	0	0
Kozhikode	7	173	21624000	3145816	0	0
Wayanad	3	66	7469000	0	1	1360000
Kannur	9	135	24687000	3535287	0	0
Kasargode	1	12	1408000	775892	1	0
<b>Total</b>	<b>79</b>	<b>1325</b>	<b>186314747</b>	<b>32748051</b>	<b>13</b>	<b>8115 558</b>

### 7.3 Solid Waste Management under SBM (U)

Swachh Bharat Mission envisages ULBs to prepare DPR for the cities, Suchitwa Mission handhold ULBs in quickly preparing DPRs for SWM through

identified expert agencies. Central government incentives for the SWM projects are in the form of a maximum of 35 % grant.

#### Details of SWM projects taken-up in Districts as per DPR under SBM (U)

Districts	No. Of ULBs with Approved DPRs	Total Cost of Approved DPRs	No. Of ULBs undertook Projects	Total No. of Projects	Expenditure till 19-20	%	No. of Projects undertook during 20-21	Expenditure during 20-21	Expenditure till date	%
Trivandrum	5	603815462	5	69	24222278	4.0%	16	11257898	35480176	5.9%
Kollam	5	197719819	5	46	18078908	9.1%	32	8469644	26548552	13.4%
Pathanamthitta	2	53738870	2	10	38914	0.1%	4	1902978	1941892	3.6%
Alapuzha	6	228634771	6	37	15208703	6.7%	4	2737712	17946415	7.8%
Kottayam	6	203963400	6	36	14008871	6.9%	42	12113797	26122668	12.8%
Idukky	2	62337909	2	11	1791802	2.9%	6	3323842	5115644	8.2%
Ernakulam	12	251132250	11	50	7389360	2.9%	57	9888388	17277748	6.9%
Thrissur	7	241483190	7	54	20009393	8.3%	69	53076909	73086302	30.3%
Palakkad	7	188860788	6	48	19701578	10.4%	15	14826447	34528025	18.3%
Malapuram	12	380817326	11	106	13116190	3.4%	41	32375075	45491265	11.9%
Kozhikode	7	220520260	7	56	31386534	14.2%	6	1805710	33192244	15.1%
Wayanad	2	53961380	3	22	698952	1.3%	7	126045	824997	1.5%
Kannur	10	272328550	5	50	13390020	4.9%	52	28245205	41635225	15.3%
Kasargode	3	85458635	3	13	1215000	1.4%	8	1360820	2575820	3.0%
Total	86	3044772610	79	608	180256503	5.9%	359	181510470	361766973	11.9%

## 7.4 Details regarding Solid Waste Management Devices Supplied by ULBs through SBM U Scheme

Projects for the supply of more than 4 lakh source level waste management devices are formulated by the UBLs in the state as per approved DPRs under Swachh Bharat Mission-Urban. Out of this, 138983 units are supplied/installed which is 33% of the envisaged target and the rest is targeted to

achieve by March 2022. When the envisaged target is achieved, more than 10% of urban households will have own waste management devices through SBM urban project alone.

Sl. No	Name of District	No. of Units as per DPR	No. of units as per DPC approved project	No. of Units supplied/ installed	% of achievement
1	Thiruvananthapuram	34167	34060	25521	75%
2	Kollam	24101	24986	4539	19%
3	Pathanamthitta	4315	4136	591	14%
4	Alappuzha	20367	22030	11740	58%
5	Kottayam	30569	31319	9266	30%
6	Idukki	6601	1466	924	14%
7	Ernakulam	17611	11244	2562	15%
8	Thrissur	37041	29033	17621	48%
9	Palakkad	32479	14028	3290	10%
10	Malappuram	74473	49815	21815	29%
11	Kozhikode	57114	18673	14002	25%
12	Wayanad	12043	4295	695	6%
13	Kannur	46123	30378	24818	54%
14	Kasargod	23111	9356	1599	7%
<b>Total</b>		<b>420115</b>	<b>284819</b>	<b>138983</b>	<b>33%</b>

## 8. Technical Sanctions from Suchitwa Mission

Technical Sanctions for 411 projects worth a total cost of Rs. 457853269 of various LSGIs have been issued by the District Suchitwa Mission in 14 Districts. Through the implementation of these projects 236256 units of Source Level waste management devices would come up across the state. Funds from all the major 4 schemes of Suchitwa Mission have been provided for the implementation of these projects.

### Details of TS issued by District Suchitwa Mission for establishing source level waste management facilities

SI No.	District	No. of Projects for which TS issued during 2020-21	Total Units of various waste management devices	Total Project Cost
1	Thiruvananthapuram	8	2348	6234900
2	Pathanamthitta	11	2116	4969220
3	Alapuzha	21	12123	24859680
4	Kottayam	99	84798	88497080
5	Idukky	17	11575	21979500
6	Ernakulam	54	18083	61007645
7	Thrissur	44	11762	34442400
8	Palakkad	21	5376	10114000
9	Malappuram	73	57667	133336744
10	Kozhikode	16	7653	16653500
11	Wayanad	12	4436	10488600
12	Kannur	33	17652	43602500
13	Kasargode	2	667	1667500
	<b>Total</b>	<b>411</b>	<b>236256</b>	<b>457853269</b>

## Details Regarding TS issued for the supply of Household level Biogas plants 2020-21

Sl No	Name of District	Biogas Plant													
		Household Level													
		0.5 m <sup>3</sup>				0.75 m <sup>3</sup>				1.00 m <sup>3</sup>					
		PVC		FRP		PVC		FRP		PVC		FRP			
Without WJ	With WJ	Without WJ	With WJ	Without WJ	With WJ	Without WJ	With WJ	Without WJ	With WJ	Without WJ	With WJ				
1	Trivandrum	0	68	0	0	0	0	0	0	0	0	0	0	0	
2	Kollam	0	0	0	0	0	0	0	0	0	0	0	0	0	
3	Pathanamthitta	0	0	0	111	0	0	0	0	0	28	0	0	0	
4	Alappuzha	0	0	0	213	0	0	0	0	0	0	0	0	180	
5	Kottayam	0	0	0	0	136	30	0	0	0	0	0	0	0	10
6	Idukki	0	0	0	0	0	0	0	0	0	0	0	0	53	
7	Ernakulam	0	0	21	63	0	0	0	0	0	27	0	0	362	
8	Thrissur	0	550	10	150	0	0	0	0	0	1600	0	0	600	
9	Palakkad	0	500	0	72	0	0	0	0	0	0	0	0	20	
10	Malappuram	0	0	0	66	0	0	0	0	0	0	0	0	480	
11	Kozhikode	0	0	0	0	0	0	0	0	0	0	0	0	0	
12	Wayanad	0	0	0	0	0	0	0	0	0	0	0	0	0	
13	Kannur	0	0	0	0	0	0	0	0	0	112	0	0	0	
14	Kasarcode	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sub Total (RLB)		0	68	157	641	10	222	0	154	0	28	0	0	6602	
Sub Total (ULB)		0	1050	10	222	0	0	0	1600	0	300	0	0	4046	
<b>Total - 14878</b>															

## Details Regarding TS issued for the supply of Household Level Composting Devices 2020-21

SI No	Name of Districts	Sector	Pipe Compost	Pot Compost	Ring Compost	Bio Digester Pot	Portable House-Hold Bio Bin	Vermi Compost	Bucket Compost	Kitchen Bin	Smart Bio Bin	Bio Composter
1	Trivandrum	Rural	0	0	0	0	0	0	0	0	0	6944
		Urban	0	0	267	0	1679	0	0	3810	0	17838
2	Kollam	Rural	0	0	0	0	0	0	0	0	0	0
		Urban	0	0	880	0	250	0	292	542	0	0
3	Pathanamthitta	Rural	0	0	0	0	0	0	0	0	0	0
		Urban	0	0	260	0	0	0	1503	0	0	11126
4	Alappuzha	Rural	0	0	575	0	440	0	440	0	0	0
		Urban	1272	763	4044	2642	2610	0	24479	21651	0	13854
5	Kottayam	Rural	0	0	0	0	3510	0	6900	0	0	0
		Urban	0	0	1142	8280	0	0	0	0	0	6945
6	Idukki	Rural	0	0	2000	0	0	0	2000	0	0	0
		Urban	0	0	400	3360	134	0	1217	410	0	3382
7	Ernakulam	Urban	0	0	735	4016	0	0	0	0	0	1517
		Rural	0	0	160	312	10338	0	335	0	0	4280
8	Thrissur	Urban	200	0	0	2464	48	410	0	0	0	2000
		Rural	0	0	0	0	0	0	0	200	0	4905
9	Palakkad	Urban	0	0	0	0	0	0	0	0	0	0
		Rural	0	0	379	0	9359	0	0	0	0	6589
10	Malappuram	Urban	0	0	2500	0	31030	0	0	0	0	8023
		Rural	0	0	5500	0	260	0	3000	0	0	1561
11	Kozhikode	Urban	0	0	4350	0	2627	0	280	0	0	0
		Rural	0	0	0	0	0	0	0	0	0	4222
12	Wayanad	Urban	0	0	2500	0	7240	0	280	0	0	0
		Rural	0	0	9527	3300	10000	0	0	0	0	7466
13	Kannur	Urban	0	0	62601	0	0	0	0	0	0	0
		Rural	0	0	628	0	0	0	0	0	0	0
14	Kasarcode	Urban	0	0	0	0	0	0	0	0	0	0
		Rural	1272	763	23187	12284	14630	0	30826	26613	0	69436
<b>Sub Total (RLB)</b>			200	0	75261	6480	44895	410	9900	0	0	18484
<b>Sub Total (ULB)</b>			2544	1526	46374	30178	49260	0	61652	53226	0	151604
<b>Total - 551994</b>												

**Details Regarding TS issued for the supply of Institutional  
& Community Level Composting Devices 2020-21**

SI No	Name of Districts	Sector	Institutional Level			Community Level		
			Portable Bio Bin	Bio bin	Ring Compost	Aerobic Composting bins	OWC plant	windrow compost plant
1	Trivandrum	Rural	0					
		Urban	0					
2	Kollam	Rural	0	2055	0	2		
		Urban	0	0	0			
3	Pathanamthitta	Rural	0	0	0	21		
		Urban	0	0	0			
4	Alappuzha	Rural	0	0	0	44		
		Urban	0	0	0			
5	Kottayam	Rural	0	0	0			
		Urban	0	0	0			
6	Idukki	Rural	0	0	0			
		Urban	0	0	0			
7	Ernakulam	Rural	0	16	0			
		Urban	0	35	0			
8	Thrissur	Rural	0	368	0	8		
		Urban	0	0	0	2		1
9	Palakkad	Rural	0	0	0			
		Urban	0	0	0			
10	Malappuram	Rural	55	0	0			
		Urban	0	0	0			
11	Kozhikode	Rural	0	0	0	9		
		Urban	0	0	0			
12	Wayanad	Rural	0	0	0			
		Urban	0	0	0			
13	Kannur	Rural	0	0	0			
		Urban	0	0	0			
14	Kasarcode	Rural	0	0	39			
		Urban	0	0	0			
Sub Total (RLB)			55	2439	39	156	0	0
Sub Total (ULB)			0	35	0	36	0	1
Total			2568			193		

## 9. Guideline Issued for Licensing

### Poultry Meat stalls and Poultry Waste Rendering Plants

Kerala has more than 16000 poultry stalls functioning in the State and it is estimated that about 1080 TPD of Poultry waste produced in the State. It is seen that some unlicensed operators have also been functioning in the state and most of them have been relying on unscientific methods for the disposal of their waste. Several incidents have come to notice of illegal dumping of chicken waste at waysides and water resources. In these

circumstances it was evident that a clear policy framework to deal with the issue arising out of inappropriate management of chicken waste is required. Hence Suchitwa Mission has drafted a guideline for licensing poultry meat stalls and poultry waste rendering plants. The guideline is under the perusal and scrutiny of Government and is expected to approve the guidelines as a Government order by early next year.





## 10. Various IEC Activities

Initiated by Suchitwa Mission During 2020-21

### 10.1 Mass media activities

- Messages regarding ideal waste management practices is given in the leading women magazines in Kerala in successive 4 issues to sensitize the women community on how to handle different types of waste and how to compost bio-degradable waste at households itself. This also carries messages to sensitize people on source level segregation of waste which helps to recover resources from Waste it is expected that the messages are reached to around 20 lakh people in the state for a consecutive 4 months time.
- Campaign held through 5 FM stations and community radios for a period of 1 month @ 10 insertions per day to dissuade use of SUPs among public and short duration campaigns in connection with Suchita Padavi declaration, '10000 Haritha office declaration", Pre-monsoon campaign 2020 are held at FM radio channels and community radios across the state.

### 10.2 Audio messages to 10 lakh people by way of Out-bound-dialing service of BSNL.

- Public appeal by way of audio messages is disseminated to 10 lakh mobile numbers in the state by utilizing the out bound dialing service of BSNL. People are advised to practice source level segregation and hand over clean dry segregated discards to Harithakarmasena through this campaign.
- Keeping regular contacts with television channels and got few episodes with regard to replicable practices, children sensitization on WM etc. telecasted in Doordarshan & Victers Channel. Contents creation for print media advertisements

### 10.3 Campaign against the use of "Single Use Plastics"

Wide spread campaign was organized through multiple media for popularizing the ban imposed on SUPs by the state government. Print media advertisements, FM & Community radio campaigns, TV programmes, Msg dissemination through cinema

theaters etc are held immediately after the ban. The campaign could generate a general awareness and positive approach among the people in the state towards the ban.

## 10.4 IEC Wall Paintings

- To promote source level segregation and composting at source, wall paintings are drawn at more than 60% of the LSGIs in the state which is targeted to reach 100% during the current year.
- Competitions are conducted among public to identify the best creative design for popularizing Harithakarmasena and the selected designs are used in the wall paintings.
- Designs are prepared through conducting a contest and estimate and specifications are prepared and made available to DSMs and LSGIs to get this work done at grass-roots level.
- It was mandated to establish wall-painting on ODF+ theme in each villages to create awareness on ODF + parameters. Hence Suchitwa Mission has prepared wall painting designs on source level composting, Plastic waste management,

## 10.5 Annual Diary with program description of SM is made available to all newly elected LSGI representatives

Since a new council took charge at LSGIs in October 2020, all the newly elected representatives were needed to be oriented on SM programs and schemes. This is done by way of distributing annual diary-2021 to all LSGI elected reps. carrying description of SM programs and schemes. Also to

sensitize them on reduce & reuse concept, cloth-bags with IEC messages are distributed among them.

## 10.6 Online Portal created and incorporated into the top online - news portal in Malayalam ( Malayala Manorama & Mathrubhmi)

A separate portal carrying articles, messages, IEC materials etc with regard to waste Management and sanitation is created and incorporated into online news portals of Malayala Manorama & Mathrubhmi to ensure its reach to the mass. This will be made available to public once the final approval

is obtained. It is expected to reach over 10 lakh people.

## 10.7 IEC Tool Development

- A leaflet to popularize MCF/ RRF is prepared and made available to LSGIs where people protested against constructing them. More than 2 lakh copies are printed by SM to distribute at locations where public protest creates hindrances in establishing such facilities.
- Leaflets on ring-composting and pot-composting methods are prepared to distribute among Public.
- A handbook on waste management targeting awareness creation of school children is prepared and is ready for printing.
- Contents creation for print media advertisements and audio creative content development for radio & OBD
- Video Production to promote LWM projects in the state.
- Video and Ppts are made available to LSGI representatives and officials as a reference guide to implement waste management projects. Liquid waste management was not a priority matter for public and LSGIs in the state until recent time when SM started to promote such projects in the state. In order to make this as a public concern and make the LSGIs to understand the need of LWM projects, video documentations are made and disseminated among LSGIs.
- Video Production to promote MCF & RRF projects at LSGI level.
- In order to tackle the grass roots level protests against setting-up of MSF and RRF, videos of short duration incorporating the response of people residing close to such facilities are produced and disseminated.

## 10.8 Social media interventions

- An active Youtube channel with more than 100 videos are available in the public domain, which carry videos on source level waste management, best practices, Videos on sustainable waste management practices like composting at source, reduce, reuse & recycle.
- Regular updates has been happening in FB page of SM.

## Expenditure of IEC and CB Activities in Districts

Districts	Gramin/ Urban	IEC Expenditure	C B Expenditure
Trivandrum	Gramin	888438	4464
	Urban	137242	2800
Kollam	Gramin	1031011	38100
	Urban	1011290	0
Pathanamthitta	Gramin	999570	13257
	Urban	0	0
Alapuzha	Gramin	236327	3693
	Urban	61333	0
Kottayam	Gramin	1559362	17725
	Urban	1202450	133605
Idukky	Gramin	0	0
	Urban	0	0
Ernakulam	Gramin	1061410	17450
	Urban	736774	0
Thrissur	Gramin	288984	0
	Urban	239014	0
Palakkad	Gramin	1023362	13456
	Urban	248294	0
Malapuram	Gramin	1224649	50535
	Urban	2173369	1000
Kozhikode	Gramin	0	0
	Urban	0	0
Wayanad	Gramin	743939	39577
	Urban	24562	6768
Kannur	Gramin	1425128	54395
	Urban	10000	0
Kasargode	Gramin	1370825	0
	Urban	0	0
<b>Total</b>		<b>17697333</b>	<b>396825</b>

## IEC Boards on Plastic Waste Management at Different Locations



# 11. Development of E-Monitoring Platform

## Smart Garbage Management

IT enabled waste management monitoring system that create complete database of origin of waste generation and provide solution to reduce the waste and segregate for proper processing.

It would enable overall control over the interventions to multiple stakeholders like, Suchitwa Mission, Haritha Kerala Mission, and Local Self Governments Department. It would also act as an

online platform for citizens of Kerala to participate and promote cleanliness standard of the state. This would be a Centralized online aggregation platform with a centralized control room for the state and call-centre facility at each LSGI level

## Highlights of the App

- Stakeholders can avail continued and comprehensive monitoring facility on fingertip
- Decentralized community level organic waste composting can be achieved
- Ensuring the citizen participation in solid waste management
- Citizen will get an idea of available waste management facilities.
- Can ensure that littering never happens in public places
- Business tie-ups and linkage can be achieved through the system
- Improved waste management governance will be achieved.
- Facilitate total sanitation coverage through local self-governing bodies
- Facilitate the coordination among various departments



## 12. Collectors @ School Programme

Collectors@School is a state wide programme targeting school students to make them aware of the need for scientific waste management and help them practice. The project initiated by Suchitwa Mission is currently being implemented as in selected schools in the state in association with Local Self Government Institutions. A minimum of three schools from each district have been selected by District Suchitwa Missions for implementing the programme in the pilot phase.

### Aim

- To develop the habit of segregation of waste in students promoting waste management and hygiene
- To develop an understanding of Reduce, Reuse, Recycle (3 R's) concept

### Activities

- Awareness programmes for students to understand the need of segregation in waste management
- Exhibition of awareness video in the smart classrooms
- Installing Mini Material Collection Facility (MCF) in schools to segregate and collect 1) PET bottles, 2) Hard Bottles 3) Milk Cover 4) Paper
- Students are inspired to segregate the four aforesaid waste at their home and bring it to the mini MCF in schools
- Linkages with Harithakarmasena or Scrap dealers for clearing the segregated waste from the mini MCF



# Green Election Campaign





The programme is now being successfully implemented in 42 schools across the state as pilot project and is now in the process of up-scaling to 3772 schools. The Mission intends to scale this up to the entire schools in the State.  
The details of PDC approved Collectors at School project is as given under.

Districts	No. of local bodies taken up C@S projects						No. of schools covered in proposed projects	No. of Bins		Amount(Rs.)	
	GP	BP	DP	ULB	Total	Proposed		Installed	Estimated	Expenditure	
Trivandrum	68	0	0	3	71	187	1087	537	8631530	2229344	
Kollam	9	0	0	0	9	14		52		39000	
Pathanamthitta	53	0	0	4	57	159	636	7	3582072	166000	
Alapuzha	21	3	1	5	30	308	1232	116			
Kottayam	38	6	0	3	47	493	1972	192	6476000	1126800	
Idukky	33	0	0	1	34	157	628	16	4166543	84800	
Ernakulam	78	0	0	3	81	723	2892	1360	15327600	7208000	
Thrissur	13			4	17	53	317	20	2094150		
Palakkad	46	1	0	4	51	317	1268	200	7626607	694325	
Malapuram	87	0	1	12	100	1027	4108	663	18712464	3381300	
Kozhikode	39			5	44	120	433	28	3560300		
Wayanad	1				1	10	40	0	280000	0	
Kannur	1		1	6	8	111	444	328	3117000	2317600	
Kasarode	3	1	0	0	4	93	372	20	2139600	0	
<b>Total</b>	<b>490</b>	<b>11</b>	<b>3</b>	<b>50</b>	<b>554</b>	<b>3772</b>	<b>15429</b>	<b>3539</b>	<b>75713866</b>	<b>17247169</b>	

### Details of TS issued from Districts for setting-up waste management devices/Facilities

Thiruvananthapuram				
SI N	Name of LSGIs	WM Devices	No. of Units	Estimated Amount
1	Poovachal	Bio composter bin	358	644,400.00
2	Pallickal	Bio Digester Pots Units	774	1,199,700.00
3	Kilimanoor	Household Biogas Plant	28	294,000.00
4		Bio Digester Pots	216	334,800.00
5	Pazhayakunnumel	Bio Digester pot units	142	255,600.00
6	Karakulam	Jeevika-Household Biobin Disstrubution	142	1,800,000.00
7	Chirayinkeezhu	Bio Composter Bin	648	1,166,400.00
8	Malayinkeezhu	Biogas Plant to Household	40	540,000.00
<b>Total</b>			<b>2348</b>	<b>6234900.00</b>
Pathanamthitta				
1	Mezhuvveli	1 M3 PVC Biogasplant With Waterjacket	28	364,000.00
2	Cherukole	1 M3 FRP Biogasplant With Waterjacket	9	121,500.00
	Cherukole	Household Bucket Compost	292	292,000.00
3	Cherukole	1 M3 FRP Biogasplant With Waterjacket	4	54,000.00
4	Pallickal	Ring Compost	436	1,090,000.00
5	Pallickal	0.5 M3 FRP Biogasplant With Water Jacket	111	1,165,500.00
6	Thumpamon	Ring Compost	133	332,500.00
7	Kozhencherry	HH Ring Compost	105	262,500.00
8	Omalloor	HH Ring Compost	40	100,000.00
9	Chenneerkara	Biobin	250	550,000.00
10	Elanthoor	Ring Compost	166	415,000.00
11	Kuttoor	Kitchen Bin	542	222,220.00
<b>Total</b>			<b>2116</b>	<b>4969220.00</b>
Kottayam				
1	Akalakunnam	Portable HDPE/Plastic Bin/ Bucket Compost	1022	1,022,000.00
2	Parathod	Kitchen Bin, Ring Compost, Pipe Compost	1254	1,283,640.00
3	Thidanadu	Kitchen Bin, Ring Compost,	1170	772,300.00
4	Ayarkunnam	Kitchen Bin , Portable Bio Composter Bin	2212	1,615,820.00
5	Maravanthuruth	Kitchen Bin	390	159,900.00
6	Koottikal	Kitchen Bin	549	225,090.00
7	Veliyannoor	Bio Digester Pot	267	413,850.00

8	Chembu	Kitchen Bin, Pot Compost	578	262,000.00
9	Udayanapuram	Kitchen Bin	485	198,850.00
10	Karukachal	Biobin,Kitchen Bin, Bucket Compost, Pipe Compost	154	281,950.00
11	Velloor	Portable HDPE/Plastic Bin/ Bucket Compost	1038	1,038,000.00
12	Pampady	Kitchen Bin, Bucket Compost, Ring Compost	1500	1,210,000.00
13	T V Puram	Kitchen Bin,Bucket Compost	490	248,100.00
14	Mundakayam	Kitchen Bin, Bucket Compost,	1890	1,241,000.00
15	Elikulam	Kitchen Bin	600	246,000.00
16	Elikulam	Bucket Compost	182	182,000.00
17	Elikulam	Biodigesterpot	24	37,200.00
18	Puthupally	Bucket Compost	2000	2,000,000.00
19	Manimala	Portable Biobin	650	1,430,000.00
20	Kuravilangadu	Bio Digester Pot,Portable Bio Bin,Pot Compost	392	613,000.00
21	Kidangoor	Bucket Compost	600	600,000.00
22	Thalanadu	Kitchen Bin,Bucket Compost, Pot Compost	254	165,550.00
23	Arpookarra	Portable Biocomposter Bin	491	883,800.00
24	Vazhoor	Portable Bio Bin, Kitchen Bin	800	865,000.00
25	Panachikadu	Kitchen Bin	480	196,800.00
26	Meenachil	Portable Bio Composter Bin	330	594,000.00
27	Kurichy	Bucket Compost	2046	2,046,000.00
28	Thiruvarpu	Kitchen Bin,Portable Bio Composter Bin	1210	1,205,000.00
29	Vazhapally	Bio Composter Pot	1000	1,550,000.00
30	Vazhapally	Bucket Compost	1250	1,250,000.00
31	Vazhapally	Ring Compost	175	437,500.00
32	Kooropada	2.5kg/Day FRP Made Portable Biogas Plant Without Water Jacket	136	1,156,000.00
33	Thalayolaparampu	Bucket Compost	847	847,000.00
34	Nedumkunnam	Portable Biobin, Kitchen Bin, Biodigester Pot	379	673,230.00
35	Kumarakom	Portable Bio Composter Bin	1110	199,800.00
36	Kooropada	Bucket Compost	838	838,000.00
37	Paippad	Bucket Compost	994	994,000.00
38	Pallickathodu	Bucket Compost	1227	1,227,000.00
39	Thalappalam	Kitchen Bin, Bucket Compost, Ring Compost	3910	499,900.00
40	Meenadom	Bucket Compost	390	390,000.00
41	Poonjar Thekkekarra	Kitchen Bin	302	123,820.00
42	Athirampuzha	Portable Bio Composter Bin	600	1,080,000.00
43	Melukavu	Kitchen Bin, Bucket Compost	522	340,870.00
44	Thrikodithanam	Ring Compost,Bio Digester Pot,Bucket Compost	1139	2,000,000.00

45	Vijayapuram	Bucket Compost	1643	1,643,000.00
46	Erumeli	Kitchen Bin	442	181,220.00
47	Vakathanam	Kitchen Bin, Pot Compost, Bucket Compost	2222	1,278,020.00
48	Kanakarri	Ring Compost	134	335,000.00
49	Vellavoor	Pipe Compost	500	450,000.00
50	Chirakadavu	Kitchen Bin, Bio Digester Pot	1297	594,470.00
51	Vellavoor	Kitchen Bin	94	38,540.00
52	Karukachal	Portable Bio Bin, Kitchen Bin, Bucket Compost	961	846,000.00
53	Bharanganam	Bucket Compost	350	350,000.00
54	Marangattupally	Portable Bio Bin, Kitchen Bin, Bucket Compost	443	436,600.00
55	Madapally	Bucket Compost	800	800,000.00
56	Madapally	Biodigesterpot	250	387,500.00
57	Teekoy	Portable Bio Bin, Kitchen Bin, Bucket Compost, Ring Compost	427	327,960.00
58	Mulakulam	Kitchen Bin	1470	602,700.00
59	Manarcadu	Kitchen Bin	600	246,000.00
60	Manarcadu	Bucket Compost	210	210,000.00
61	Manjoor	Kitchen Bin, Ring Compost	300	541,000.00
62	Kadanadu	Kitchen Bin, Ring Compost	1250	1,035,100.00
63	Panachikadu	Portable Biocomposter Bin	1803	3,245,400.00
64	Aimanam	Portable Biocomposter Bin	3000	5,400,000.00
65	Kozhuvanal	Kitchen Bin, Bucket Compost	489	370,410.00
66	Mutholy	Bucket Compost	1500	1,500,000.00
67	Njeezhoor	Kitchen Bin	510	209,100.00
68	Vechoor	Kitchen Bin	395	161,950.00
69	Erattupetta ULB	Portable Bio Bin	1000	2,200,000.00
70	Erattupetta ULB	Portable Bio Bin	900	1,980,000.00
71	Erattupetta ULB	Portable Bio Bin	900	1,980,000.00
72	Koruthodu	Kitchen Bin	620	254,200.00
73	Moornilavu	Portable Bio Composter Bin	259	466,200.00
74	Kangazha	Kitchen Bin, Portable Bio Bin	750	397,000.00
75	Neendoor	Kitchen Bin	1245	510,450.00
76	Poonjar	Bucket Compost	366	366,000.00
77	Kanjirapally	Kitchen Bin, Pot Compost, Bio Bin	2025	1,582,250.00
78	Uzhavoor	Ring Compost, Bio Digester Pot, Bio Bin	320	669,000.00
79	Thalayazham	Bucket Compost	1500	1,500,000.00
80	Pala ULB	Portable Bio Bin	710	1,562,000.00
81	Kallarri	Kitchen Bin	1264	518,240.00

82	Ramapuram	Ring Compost	250	625,000.00
83	Ramapuram	Portable Bio Bin	241	530,200.00
84	Karoor	Portable Bio Bin	396	871,200.00
85	Kaduthuruthy	Bucket Compost	1387	1,387,000.00
86	Ramapuram			
87	Ramapuram			
88	Chembu	Kitchen Bin	640	262,400.00
89	Ettumanoor	Portable Bucket Compost	1500	1,500,000.00
90	Ettumanoor	Portable Bucket Compost	1500	1,500,000.00
91	Vaikom	Bucket Compost	3900	3,900,000.00
92	Thidanadu	Ring Compost	1598	3,995,000.00
93	Kurichy	Ring Compost	66	165,000.00
94	Mutholy	Ring Compost	100	250,000.00
95	Mutholy	Biogas Plant	10	135,000.00
96	Marangattupally	Portable Biobin, Bucket Compost	140	224,000.00
97	Kumarakom	Portable Biocomposter Bin	1110	1,998,000.00
98	Kurichy	Bucket Compost	1000	1,000,000.00
99	Kurichy	Ring Compost	134	335,000.00
<b>Idukky</b>				
1	Purappuzha	Bio Digester Pots	1000	1,550,000.00
2	Purappuzha	Bio Composter Bin	1000	1,800,000.00
3	Manakkad	Ring Compost Units	132	330,000.00
4	Manakkad	Portable Biogas Plant	13	175,500.00
5	Kodikulam	Ring Compost Units	111	277,500.00
6	Thodupuzha	Portable Biogas Plant	100	1,350,000.00
7	Thodupuzha	Ring Compost Units	2000	5,000,000.00
8	Thodupuzha	Bucket Compost Units	2000	2,000,000.00
9	Konnathady	Bio Composter Bin	234	421,200.00
10	Konnathady	Ring Compost Units	266	665,000.00
11	Purappuzha	Bio Composter Bin	66	118,800.00
12	Karimannoor	Bio Digester Pots	3612	5,598,600.00
13	Kudayathoor	Portable Biogas Plant	40	540,000.00
14	Vellathooval	Ring Compost Units	211	527,500.00
15	Edavetty	Ring Compost Units	200	500,000.00
16	Edavetty	Bio Digester Pots	368	570,400.00

17	Nedumkandam	Ring Compost Units	222	555,000.00
<b>Thrissur</b>				
1	Edathiruthi	Biogas Plant, 0.5 M3 FRP With WJ	10	105000
2	Thanniyam	Ring Compost	23	225000
3	Arimpur	Biogas Plant, 0.5 M3 FRP With WJ	30	315000
4	Arimpur	Biogas Plant, 0.5 M3 FRP With WJ	15	157500
5	Arimpur	Ring Compost	25	62500
6	Kolazhy	Bio Compostor Bin	51	450000
7	Pazhayannur	Bio Digester Pot	100	155000
8	Elavally	Bio Digester Pot	143	221650
9	Kodungallur	Bio Digester Pot	464	719200
10	Guruvayur	Biogas Plant, 1 M3 FRP With WJ	56	756000
11	Venkidangu	Bucket Composting Unit	335	335000
12	Vallathol Nagar	Bio Compostor Bin	200	734400
13	Annamanada	Bio Compostor Bin	278	500400
14	Padiyur	Ring Compost	112	280000
15	Velur	Bio Compostor Bin	131	235800
16	Wadakkanchery	Vermi Compost Unit	410	492000
17	Desamangalam	Biogas Plant, 0.5 M3 FRP With WJ	24	252000
18	Wadakkanchery	Bio Bin, No - 48	48	3388000
19	Puthur	Bio Compostor Bin	28	50400
20	Puthur	Bio Compostor Bin	230	414000
21	Puthur	Bio Compostor Bin	217	390600
22	Madakkathara	Bio Compostor Bin	25	45000
23	Kattakambal	Biogas Plant, 1 M3 FRP With WJ	10	135000
24	Wadakkanchery	Biogas Plant, 0.5 M3 FRP With WJ	72	756000
25	Wadakkanchery	Biogas Plant, 1 M3 FRP With WJ	200	2700000
26	Nadathara	Biogas Plant, 0.5 M3 FRP With WJ	10	105000
27	Manalur	Bio Compostor Bin	261	342000
28	Varavoor	Biogas Plant, 0.5 M3 FRP With WJ	28	294000
29	Eriyad	Bio Compostor Bin	1150	2070000
30	Eriyad	Biogas Plant, 1 M3 FRP With WJ	10	135000
31	Parappukara	Bio Compostor Bin	39	70200
32	Punnayurkulam	Bio Compostor Bin	414	745200
33	Nenmanikkara	Bio Compostor Bin	35	63000
34	Nenmanikkara	Bio Compostor Bin	54	97200
35	Panancherry	Bio Compostor Bin	988	1778400

36	Kaiparamba	Bio Compostor Bin	90	198000
37	Kaiparamba	Biogas Plant, 0.5 M3 FRP With WJ	18	189000
38	Mgkavu	Bio Bin	338	743600
39	Annamanada	Bio Compostor Bin	250	450000
40	Kodungallur	Biogas Plant, 1 M3 FRP With WJ	180	2430000
41	Wadakkanchery	Biogas Plant, 3 M3 FRP With WJ	41	2460000
42	Tholur	Bio Compostor Bin	250	59400
43	Kunnamkulam	1. Bio Digester Pot 2. Biogas Plant, 1 M3 FRP With WJ 3. Bio Compostor Bin 4. Pipe Compost Unit	2000 100 2000 200	8230000
44	Orumanayur	Bio Digester Pot	69	106950
<b>Palakkad</b>				
1	Ayilur	Bio Composter Bin	308	554,400.00
2	Nemmara	Biogas Plant	10	105,000.00
3	Nallepilly	Bio Composter Bin (General)	310	558,000.00
4		Bio Composter Bin (S.C)	155	279,000.00
5	Anakkara	Bio Composter Bin	320	576,000.00
6	Akathethara	Bio Composter Bin	124	223,200.00
7		Biogas Plant	14	147,000.00
8	Vellinezhi	Bio Composter Bin	186	334,800.00
9	Karakurussi	Bio Composter Bin	80	144,000.00
10	Pookotukkavu	Biogas Plant	26	273,000.00
11	Melarcode	Biogas Plant	16	168,000.00
12	Elavanchery	Bio Composter Bin	200	360,000.00
13	Pallashana	Kitchen Bin	200	442,000.00
14		Bio Composter Bin	200	
15	Thiruvegapura	Bio Composter Bin	928	1,670,400.00
16	Thirumittakode	Bio Composter Bin	187	336,600.00
17	Erimayur	Bio Composter Bin	617	1,110,600.00
18	Vaniyamkulam	Bio Composter Bin	670	1,206,000.00
19	Vadakkanchery	Bio Composter Bin	620	1,116,000.00
20	Shornur	Biogas Plant	5	150,000.00
21	Vandazhy	Bio Composter Bin	200	360,000.00
<b>Malappuram</b>				
1	Kuzhimanna	Biobin	455	1,001,000.00
2	Edayur	Biogas Plant 1m3 FRP WJ	10	135,000.00
3	Edayur	Household Ring Compost	112	280,000.00

4	Morayur	Bucket Compost	100	100,000.00
5	Ponnani	Household Ring Compost	1500	2,000,000.00
6	Vattamkulam	Household Biogas Plant	40	540,000.00
7	Urngattiri	Household Pipe Compost	425	382,500.00
8	Urngattiri	Biogas Plant 1m3 FRP WJ	40	540,000.00
9	Thrikkalangode	Bucket Compost	2000	2,000,000.00
10	Kondotty	Biocomposter Bin	1110	1,998,000.00
11	Kondotty	Bucket Compost	600	600,000.00
12	Kondotty	Bucket Compost	1000	1,800,000.00
13	Valancheri	Biogas Plant - 1 M3	33	4,455,000.00
14	Valancheri	Ring Compost	2970	7,425,000.00
15	Valancheri	Biocomposter Bin	1650	3,465,000.00
16	Kottakkal	Biobin	5000	1,100,000.00
17	Kottakkal	Biobin	300	4,050,000.00
18	Purathur	Biocomposter Bin	322	677,600.00
19	Puzhakkattiri	Biobin	607	1,335,400.00
20	Anakkayam	Biobin	250	550,000.00
21	Tirur	Ring Compost	108	272,250.00
22	Tirur	Ring Compost	100	250,000.00
23	Tirur	Biobin	5930	13,050,000.0
24	Tirur	Biogas Plant - 1 M3	5	1,000,000.00
25	Malappuram	Ring Compost	300	750,000.00
26	Malappuram	Biobin	800	17,600,000.0
27	Malappuram	Bucket Compost	7000	7,000,000.00
28	Malappuram	Biogas Plant - 1 M3	300	4,050,000.00
29	Thirunnavaya	Biobin	200	360,000.00
30	Vazhayur	Ring Compost	207	517,500.00
31	Vallikkunnu	Biobin -Hh	345	759,000.00
32	Pulikkal	Biobin -Hh	420	924,000.00
33	Nannamukku	Biobin -Hh	510	630,000.00
34	Triprangode	Biodigester Bin	333	630,000.00
35	Kondotty	Biocomposter Bin	1650	2,970,000.00
36	Othukkungal	Biobin -Hh	1937	4,261,400.00
37	A R Nagar	Ring Compost	210	525,000.00
38	A R Nagar	Biobin -Hh	611	1,454,200.00
39	Kannamangalam	Biobin -Hh	277	609,400.00
40	Uragam	Kitchen Bin	1244	1,026,135.00



41	Marakkara	Ring Compost	120	300,000.00
42	Parappur	Pipe Compost	1000	900,000.00
43	Cheekkode	Biogas Plant - 1 M3	30	405,000.00
44	Muthuvallur	Biobin- Hh	112	246,400.00
45	Kondotty	Biogas Plant - 1 M3	80	1,080,000.00
46	Peruvallur	Biobin-Hh	300	660,000.00
47	Tirurangadi	Biogas Plant - 1 M3	400	5,400,000.00
48	Munniyur	Biobin-Hh	529	1,163,800.00
49	Thirunnavaya	Biocomposter Bin	200	360,000.00
50	Edayur	Biobin-Hh	285	627,000.00
51	Vengara	Pipe Compost	1500	1,350,000.00
52	Vengara	Biogas Plant - 1 M3	10	135,000.00
53	Puzhakkattiri	Biobin-Hh	809	1,600,000.00
54	Ponmundam	Biobin-Hh	253	556,600.00
55	Ponmundam	Biobin-Hh	196	431,200.00
56	Valavannur	Biogas Plant -Hh	15	202,500.00
57	Morayur	Biocomposter Bin-Hh	149	149,000.00
58	Morayur	Biocomposter Bin-Public		
59	Morayur	Biogas Plant -Institution	1	13,500.00
60	Kannamangalam	Biobin -Institutional	53	116,600.00
61	Keezhuparambu	Biobin- Hh	53	116,600.00
62	Kalpakancheri	Ring Compost- Hh	602	1,505,000.00
63	Peruvallur	Biobin- Hh	300	660,000.00
64	Nannamukku	Biocomposter Bin	926	1,666,800.00
65	Pookkottur	Ring Compost - Hh	560	1,400,000.00
66	Kavannur	Ring Compost - Hh	660	1,650,000.00
67	Areekkode	Biobin- Hh	50	110,000.00
68	Chelembra	Biobin- Institutional	55	121,000.00
69	Nilambur	Ring Compost- Hh	2376	5,940,000.00
70	Nilambur	Biobin - Hh	4500	9,900,000.00
71	Mankada	Biobin - Hh	128	283,160.00
72	Mankada	Biogasplant -Hh	25	265,129.00
73	Mankada	Ring Compost - Hh	379	949,070.00
<b>Kannur</b>				
1	Chirakkal	Ring compost - HH	500	1,250,000.00
2	Eranholi	Ring compost - HH	500	1,250,000.00
3	Pattuvam	Ring compost - HH	133	332,500.00

4	Kuttiyattur	Ring compost - HH , Kitchen Bin	275	425,000.00
5	Mangattidam	Ring compost - HH	199	497,500.00
6	Kunnothuparamba	Ring compost - HH	200	500,000.00
7	Irikkur	Ring compost - HH	325	812,500.00
8	Valapattanam	Ring compost - HH	145	362,500.00
9	Narath	Ring compost - HH	200	500,000.00
10	Ramanthali	Ring compost - HH	199	1,000,000.00
11	Pariyaram	Ring compost - Institutional	40	100,000.00
12	Cherukunnu	Ring compost - Institutional	30	75,000.00
13	Iritty mun	Ring compost - HH	1000	2,500,000.00
14	Narath	Ring compost - Institutional	15	37,500.00
15	Kurumathur	Ring compost - HH, Biogas Plant	356	890,000.00
16	Pattuvam	Ring compost - HH	421	1,052,500.00
17	Mayyil	Ring compost - HH	600	1,500,000.00
18	Kannapuram	Ring compost - Institutional	7	17,500.00
19	Kannapuram	Ring compost - HH	100	250,000.00
20	Aralam	Ring compost - Institutional	60	150,000.00
21	Ezhome	Ring compost HH	338	845,000.00
22	Munderi	Ring compost HH	338	505,000.00
23	Anthur Mun	Ring compost HH	601	1,502,500.00
24	Ayyankunnu	Ring compost HH	517	1,292,500.00
25	Pattiam	Ring compost HH	500	1,250,000.00
26	Panoor Mun	Ring compost HH	1000	2,500,000.00
27	Thaliparamba	Ring compost HH	6000	15,000,000.0
28	Azhikode	Ring compost HH, Biogas Plant, Ring compost institutional	1126	2,612,500.00
29	Dharmadam	Ring compost - HH	801	2,002,500.00
30	Cheruthazham	Ring compost - HH	100	25,000.00
31	New Mahi	Ring compost - HH	200	500,000.00
32	Kadabur	Ring compost - HH	506	1,265,000.00
33	Ulikkal	Ring compost - HH	320	800,000.00
			<b>17652</b>	<b>43602500</b>
<b>Alapuzha</b>				
1	Aryad	Biogas Plant	18	1,791,000.00
		Biocomposter bin	890	
2	Mannanchery	1m3 with water Jacket	100	1,350,000.00
3	Punnappa (S)	0.5m3 with water Jacket	59	619,500.00
4	Pathiyoor	1m3 with Water jacket, Bio composter Bin	315	634,500.00

5	veeyapuram	Bucket Compost	1300	1,300,000.00
6	Karthikappally	Biocomposter bin	185	333,000.00
7	Cheruthana	Biocomposter bin	318	572,400.00
8	Punnapra North	Biocomposter bin	243	437,580.00
9	Mavelikkara	Ring compost	575	1,437,500.00
10	Mavelikkara	1m3 without water jacket	50	625,000.00
11	Cheriyamad	Biocomposter bin	770	1,386,000.00
12	Pallipad	Biogas Plant,Biocomposter bin, Ring compost	13	1,254,500.00
13	Ala	Biocomposter bin (G & SC)	467	840,600.00
14	Ramankary	Biocomposter bin	833	1,499,400.00
15	Vallikunnam	Biocomposter bin	702	1,263,600.00
16	Thazhakkara	0.5m3 with WJ Biogas Plant	97	1,018,500.00
17	Purakkad	Biocomposter bin	247	444,600.00
18	Krishnapuram	Biocomposter bin	1229	2,212,200.00
19	Chingoli	0.5m3 WJ Biogas Plant,Biocomposter bin	26	494,400.00
20	Karuvatta	Biocomposter bin	2678	4,820,400.00
21	Thaneermukkom	0.5m3 WJ Biogas Plant	50	525,000.00
			<b>12123</b>	<b>2,48,59,680</b>
<b>Ernakulam</b>				
1	Mulanthuruthy	Biogas Plant	50	525,000.00
2	Puthenvelikkara	Biodigester Pot	1000	1,550,000.00
3	Chendamangalam	Biocomposter Bin	16	28,800.00
4	Chendamangalam	Kitchen Bin	410	1,230,000.00
5	Cheranalloor	Biodigester Pot	500	775,000.00
6	Cheranalloor	Biogasplant	17	204,000.00
7	Thrikkakkara	Biogas Plant	1500	18,000,000.0
8	Thrikkakkara	Ring compost	500	1,250,000.00
9	Ankamaly	Biogas Plant	600	8,100,000.00
10	Ankamaly	Biodigester Pot	4000	6,200,000.00
11	Chittattukara	Biogas Plant	21	178,500.00
12	Chittattukara	Biobin	134	294,800.00
13	Thrippunithura	Biogas Plant	100	1,200,000.00
14	Vadakkekkara	Biocomposter Bin	2000	3,600,000.00
15	Njarakkal	Biocomposter Bin	277	498,600.00
16	Kuzhuppilly	Bucket Compost	225	225,000.00
17	Edavanakkad	Biocomposter Bin	61	109,800.00
18	Edavanakkad	Biocomposter Bin	61	109,800.00

19	Perumbavoor	Ring compost	235	587,500.00
20	Perumbavoor	Biogas Plant	10	85,000.00
21	Edaykattuvayal	Biogas Plant	30	405,000.00
22	Pindimana	Biodigester Pot	85	131,750.00
23	Pindimana	Biodigester Pot	16	24,800.00
24	Pallipuram	Bucket Compost	992	992,000.00
25	Thiruvaniyoor	Biogas Plant	10	135,000.00
26	Thiruvaniyoor	Biogas Plant	38	513,000.00
27	Thiruvaniyoor	Biogas Plant	5	52,500.00
28	Thiruvaniyoor	Biogas Plant	5	52,500.00
29	Thiruvaniyoor	Biodigester Pot	54	83,700.00
30	Kumbalam	Biogas Plant	3	31,500.00
31	Kumbalam	Biodigester Pot	144	223,200.00
32	Malayattoor Neeleeswaram	Ring compost	300	750,000.00
33	Udayamperoor	Biocomposter Bin	100	180,000.00
34	Kunnathunadu	Biogas Plant	54	729,000.00
35	Elamkunnappuzha	Biogas Plant	10	120,000.00
36	Elamkunnappuzha	Biodigester pot	514	796,700.00
37	Amballoor	Biocomposter Bin	205	369,000.00
38	Kottuvally	Biocomposter Bin	346	622,800.00
39	Kadamakudy	Biodigester pot	46	71,300.00
40	Tripunithura	Biocomposter Bin	67	120,600.00
41	Varapuzha	Biogas Plant	2	43,000.00
42	Varapuzha	Biodigester pot	100	155,000.00
43	Varapuzha	Biodigester pot	688	1,066,400.00
44	Maneed	Biodigester pot	229	35,495.00
45	North Paravur	Bio composter bin	1450	2,610,000.00
46	North Paravur	Bio composter bin	35	63,000.00
47	North Paravur	Biogasplant	26	351,000.00
48	North Paravur	Biogasplant	150	1,575,000.00
49	Varappetty	Biogasplant	27	364,500.00
50	Keerampara	Biogasplant	50	675,000.00
51	Parakadavu	Biogasplant	41	553,500.00
52	Keezhmadu	Biogasplant	112	1,512,000.00
53	Keezhmadu	Biocomposterbin	332	597,600.00
54	Rayamangalam	Ring compost	100	250,000.00
			<b>18083</b>	<b>61007645</b>

Wayanad				
1	Edavaka	Bio Composter unit	397	714,600.00
2	Pozhuthana	Bio Composter unit	650	1,170,000.00
3	Thariode	Bio Composter unit	295	531,000.00
4	Thavinjal	Bio Composter unit	555	999,000.00
5	Mullenkolly	1m3 poratable FRP biogas plant with water jacket	9	121,500.00
6	Muppainadu	Bio Composter unit	700	1,260,000.00
7	Vythiri	Bio Composter unit	741	1,333,800.00
8	Mananthavady	1m3 poratable FRP biogas plant with water jacket	40	540,000.00
9	Pulpally	1m3 poratable FRP biogas plant with WJ	27	364,500.00
10	Panamaram	Bio Composter unit	611	1,099,800.00
11	Panamaram	1m3 poratable FRP biogas plant with WJ	138	1,863,000.00
12	Kottathara	Bio Composter unit	273	491,400.00
	Total		<b>4436</b>	<b>10488600</b>
1	Thrikkaripur	Ring Compost- HH	628	1570000
2	Thrikkaripur	Ring Compost- HH	39	97500
			<b>667</b>	<b>1667500</b>
Kozhikode				
1	Peruvayal	ring-80, Biobin-80	160	376,000.00
2	Madavoor	ring	226	535,500.00
3	Onchiyam	biogas	51	535,500.00
4	Kottur	Ring	100	250,000.00
5	Ramanattukara	ring	750	1,875,000.00
6	Kakkur	ring	242	605,000.00
7	Kizhakothe	ring	600	1,500,000.00
8	Ayengeri	biocomposter bin	1275	2,295,000.00
9	Chekkid	biogas	15	157,500.00
10	Chathamangalam	bucket	1334	1,334,000.00
11	Edacheri	ring	1250	3,125,000.00
12	Thuneri	ring	300	750,000.00
13	Koothali	ring	175	437,500.00
14	Moodadi	ring	533	1,332,500.00
15	balusery	ring	618	1,545,000.00
			<b>7653</b>	<b>16653500</b>

# Liquid Waste Management

The issue of water pollution and groundwater contamination needs to be addressed with prime focus in the state, Suchitwa mission provides all required support to local self-government institutions to come up with viable projects and provides technical sanctions for those which fit well in terms of prescribed specifications. The Mission supports the Local-Self-Governments in the areas of Technology, design, specification, estimate, operation and maintenance strategy, implementation plan for liquid waste management system to concerned Local-Self-governments. With the technical and financial support of Suchitwa Mission 2 septage treatment plants, one at Brahmapuram and one at Wellington Island started functioning. Construction of 2 hospital based Sewage treatment plants and 3 STP/ETP for public

places were on progress during the year and out of this 5 started functioning. In addition to the above Suchitwa Mission is taking initiative for setting-up sewage treatment plants in 14 Taluk / General hospitals, and are now in DPR Preparation stage.

As LWM is a new area of interventions for LSGIs, Suchitwa Mission offers handholding support to them which help the state to launch 51 Sewage Treatment Plants and Fecal Sludge Treatment Plants and is expected to make operational by the end of 2022. Two districts viz. Alapuzha & Kasargode will have large-scale FSTP which is sufficient to cater the LWM needs of entire LSGIs in the district. The scope of establishing such plants in more district has been exploring and targeted to establish such system in at least 5 district in the next year.

## Details regarding STPs & ETPs

Total number of projects	51
Functioning	5
Under Construction	11
DPR stage	34
Waiting for DPC approval	1

## Functioning STPs / ETPs

Sl. No.	Location	Existing STP Capacity (MLD)	Capacity Being Utilized (MLD)	Operational Status of STP	Compliance Status of STP	Implementing agency	Fund details
1	Taluk Hospital, Sulthan Bathery Wayanad	0.14	0.05	Working in half capacity (Initiatives of inauguration going on)	Ph 7.53 TSS 1.0 mg/l COD 16.25mg/l BOD 0.13 mg/l	Green method engineering pvt ltd. (9846 70 7935)	Suchitwa keralam rural Total Cost= 1 Crore SM fund= 2,87,000/- LSGD= 47,13,000/-
2	STP at comfort Station Adimali GP, Idukki	0.01	0.01	Functioning	Ph 7.01 TSS 32 mg/l COD 110 mg/l BOD 26.4 mg/l	Areena Hygiene solutions pvt ltd. (8089050124)	SBM (G) Total Cost= 18,26,500 SM und = 13,39,000 LSGD= 487500

3	Re-vamping of 35 KLD ETP at Kuriachira Slaughter House Corporation, Thrissur	0.035	0.035	Functioning	Ph 7.3 TSS 16.04 mg/l COD 190mg/l BOD 21.2 mg/l Oil and grease 12.01 mg/l	M- way Consultants and developers pvt ltd. (9387733562)	Not SM funded Total cost= 37,00,000/- LSGD= 37,00,000/-
4	District Hospital, Mananthavady, Wayanad	0.3	0.2	Functioning		Green method engineering pvt ltd. (9846 70 79 35)	
5	Construction of 6 KLD ETP for Kumily slaughter house Kumali GP, Idukki	0.006	Completed		Functional	(Hindustan pre-fab limited)	Not SM funded Total Cost= 20,65,000/-, LSGD share 20,65,000/-

### Details of each under Construction STPs in the State

Sl. No.	Location	The capacity of the plant (MLD)	Physical Progress in %	Status of I&D or House sewer connections	Incremental Progress	Fund details
1	STP at Pampad Housing colony Malappuram Municipality, Malappuram	0.110	75% completed	Under construction	Civil structure completed. Mechanical & Electrification going on	Suchitwa keralam Urban Total cost= 78,00,000/-, SM fund= 58,50,000/-, LSGD= 19,50,000/-
2	ETP in fish market Ponmundam GP, Malappuram	0.01	95% completed	Under construction	Units are installed. Trial run Conducted	SBM(G) Total cost= 30,48,240 SM fund= 10,00,000 LSGD= 20,48,240
3	STP at CHC Cherpu BP, Thrissur	0.01	80% completed	Under construction	Shuttering work of tanks going on	SBM (G) Total cost=11,00,000/- SM fund= 1,00,000/- LSGD= 10,00,000/-
4	50 KLD Waste Water Treatment Plant at Municipal Bus stand. Tirur Municipality, Malappuram	0.05	98% completed	Under construction	Trial run Conducted	Not SM funded Total Cost= 60 Lakhs LSGD= 60 Lakhs

5	STP at Chittumala Old age home. Chittumala BP, Kollam	0.015	90% Work completed	Under construction	Civil structure and Mechanical completed. Partition, pipe and plastering work going on	Not SM funded Total cost= 28,20,000/- LSGD= 28,20,000/-
6	Construction of 45 KLD wastewater treatment plant at Kalpetta Govt. Ayurveda Hospital DP, Wayanad	0.045		Work tendered	Tender accepted	<b>Not SM funded</b> Total Cost= 48 Lakhs LSGD= 48Lakhs
7	135 KLD capacity Decentralized Sullage treatment plant at Uppala Town Mangalpady, Kasaragod	0.135		Tendering Stage		
8	STP at private bus station, Kothaik unnu, Thodupuzha	0.03		Tendering Stage		<b>Suchitwa keralam Urban</b> Total= 31,37, 000/- SM fund= 11,37,000/- LSGD= 20, 00,000
9	STP at Taluk Hospital, Adimaly Adimaly Block Panchayat, Idukki	0.060		TS issued		<b>Suchitwa keralam rural</b> Total cost= 47,76,000/- SM fund= 47,76,000/-
10	STP for Idukki district hospital and district Ayurveda hospital, Thodupuzha	0.205		TS issued	Tender invited. But no one participated.	<b>Suchitwa keralam rural</b> , Total cost= 1,70,36,000/- SM fund= 1.20,36,001/- MLA fund= 49,99,999/-
11	Wastewater treatment plant at Kuttyyadi government taluk hospital, Kozhikode	0.080		Tendering Stage		<b>Not funded by SM</b> Total Cost=32 Lakh+9s LSGD=32 Lakhs



# Best Practices

## 1. Thuvur GramaPanchayat



**“Will’ will find a way - Waste management is an opportunity for employment generation for local women in Thuvur**

### Story of stuff by Thuvur GramaPanchayat

Thuvur, a rural village in Malapuram district in Kerala became a perfect example for decentralised management of solid waste by strictly following and implementing the state’s waste management policy of source segregation, source level composting and handing over clean-dry-segregated waste to Green Task Force popularly known in Kerala as Harithakarmasena. Haritha Karma Sena (HKS) is an institutional mechanism in place to assist the households, institutions and community for managing the bio-waste at source and move the non-bio-waste to Material Collection facility. HKS is a small enterprise unit mostly formed and trained through the State Poverty Eradication Mission (known as Kudumbasree) and sustain on user-fees collected for the services they provide.

Thuvur in Kalikavu Block of Malapuram district consist of 17 wards and 30500 population. There are around 6000 households and 100 institutions which come under the purview of this LSGIs jurisdiction. Agriculture is the main source of income for the majority of people here. Almost 12 % of the population here belongs to Schedule Cast and Tribe.

There was no proper system of handling plastic waste which creates trouble to farmers and agriculture labourers here since the presence of packaging plastics, carry bags and pet bottles in the the agriculture land affected the quality of soil, its productivity, yield etc. This creates concerns among the farmers and LSGI representatives. The Panchayat administration realized the need of immediate intervention and started exploring for solutions. They started consultation with Suchitwa Mission, the nodal agency of the State for sanitation and waste management, and decided to launch door to door collection of dry waste from each household and institution. Though the quantity of plastic and other dry waste by weight is only less than 20% of the total waste generation, it creates environmental challenges by way of not getting segregated. People disposes everything together in their courtyard and fields and accumulated plastics later spread across and become a menace.

At this context 15 members Harithakarmasena group started engaging in door to door collection of dry waste. This enterprise group was formulated and trained by the panchayat with the support of Suchitwa Mission and Harithakeralam Mission. A temporary shed was arranged by the panchayat which is located very close to the panchayat-office to function as MCF as the panchayat lacks resources for immediately setting-up a permanent

MCF. Material Collection Facilities (MCF) are the temporary storage facility for non-biodegradable waste which is collected from households and institutions and from where it is transported for Resource Recovery and recycling. The plastics and dry discards accumulated over the temporary MCF are segregated into more than 40 items by the HKS. The forward linkage of dry discards is ensured by establishing a tie-up with the local scrap dealer. The Panchayat floated a tender for clearing the materials in MCF on regular basis and the local scrap dealer won the tender and get into an agreement with the Panchayat.

The door to door collection happens 4 times a year from Households and every month from institutions. User-fee is collected 4 times a year at the rate of Rs.30 per households. Out of the 6000 households, 4750 are paying user-fee each time they conduct a collection drive. The user-fee collection from institutions comes close to Rs.7500 per month at the rate of Rs.75 per month from 100 institutions. The average revenue from user-fee for a 3 month period comes around 1.65 lakh. The Harithakarmasena members have been earning Rs.340/working day with an average of 10-12 working days per month.

It is estimated that more than 20 lakh nos. of plastic packaging covers and 15 tonnes of discarded glass bottles and broken glasses are sold from here and generated revenue of 1.2 lakh so far from the sale of more than 40 items of segregated dry discards which otherwise can be called as raw-materials or resources for recycling.

Thuvur is the first LSGI in the state who established an agreement with a cement factory (ACC) to clear out the rejects accumulated in their MCF for utilizing them as fuel through co-process in cement factory. The task of making the rejects suitable for co-processing is not an easy one. It must be free from dirt, moisture and metal particles. The Harithakarmasena ensures that the material they hand over to ACC cement factory meets the stipulated standards. So far the Panchayat cleared more than 40 tonnes of rejects which includes resin bags, and foot-wears etc by way of handing over them to ACC for co-processing.

Thuvur find no excuses despite having resource crunch like land, money, building etc to stay away from carrying-out proper waste management services. Convincing the people on the need and importance of proper waste management system and the benefits of having such system is important. The ward members can play a crucial role here in orienting the public. Also the entire operations on the ward should be monitored by the ward member. They must extend all the support to Harithakarmasena in user-fee collection and to ensure that the waste which is handing over by the households is up-to the standards suggested by HKS.

## 2. Malappuram's Keezhattur village is a model ODF Plus village



Owing to various ODF Plus interventions, Keezhattur village in Malappuram district of Kerala is today a model ODF Plus village. Famous for its socio-cultural relevance as the capital of ancient Valluvanad, the village which was declared as ODF in 2016 has shown exceptional performance in sanitation and waste management, compared to other Grama Panchayats (GPs) in the Perinthalmanna Block.

Keezhattur village can boast of 100 per cent door to door collection of dry waste; and 100 percent

management of wet waste at source. The village has been successfully collecting user-fee for collection of segregated waste from all institutions and 70 percent of households.

A Material Collection Facility (MCF) is available at GP level and forward linkages have been established through Resource Recovery Facility (RRF) at the block level.

Further, an initiative that has successfully reduced the volume of dry discards or non-biodegradable

waste is the effective implementation of the Green Protocol in all government offices, institutions and for events organised under the purview of the GP.

Green protocol is essentially a set of measures which would result in significant reduction of waste generation with a primary focus on prevention of use of disposables and using reusable alternatives such as glass, stainless-steel and porcelain crockery and cutlery.

Green protocol – an enviro-cultural revolution has truly become a movement in Kerala. When Green Protocol is implemented in any event, non-biodegradable waste generation becomes close to zero. Therefore, the question of waste management after the event becomes virtually non-existent. It was tried for the first time during the National Games held in Kerala and now it has become a people's movement with many functions including weddings implementing the Green Protocol.

Another winning strategy was the engagement of an external agency for rendering support for solid waste management (SWM) initiatives. The agency facilitates regular monitoring of SWM initiatives under the guidance of the GP administration.

Notably, all schools, Anganwadi Centres and public offices have toilet facilities. More than 80 per cent of households and institutions have their own source level biodegradable waste management facilities, while all schools and Anganwadi centres have their own systems for managing solid waste and soak pits for managing liquid waste.

To keep people aware of the importance of hygiene and sanitation, ODF plus messages and other IEC messages are exhibited at prominent locations.

State government initiatives to achieve ODF Plus villages and districts:

The State Government in August 2021 had issued an order regarding ODF-Plus Inspection criteria and team constitution. It had also organized an orientation program at state and district level for all stakeholders and conducted a field level survey for identifying SWM and LWM assets in the districts.

During the survey, gaps were identified, and local bodies were given instructions to begin projects using the SBM (G) Phase II Fund, 15th Finance Commission Grant and plan fund of the Local Body. Technical support is being provided to complete the projects on war-footing.

Focus is also given to IEC activities that promote source level segregation, management of wet waste at source itself and to motivate waste generators to pay user fee for the door-to-door collection and processing of waste. Keezhatoor is now become an emulative model for sanitation and waste management in Malapuram district. Several LSGIs are now visiting the grama panchayat to understand the activities taken-up here in sanitation sector. This would further help other LSGIs to actively get involved in sanitation and waste management interventions.

### 3. A model SWM initiative in Bedadukka GP, Kerala



The solid waste management initiative in Bedadukka Grama Panchayat (GP) of Kasargod District in Kerala has all the required infrastructure and efficient systems in place for collection and management all types of solid waste, making it a model SWM initiative in the State.

The GP has a population of 27,868 individuals from 8424 households, 491 institutions, 4 markets, 7 slaughterhouses, 2 Material Collection facilities (MCF), 171 mini MCFs, one resource recovery facility (RRF) and one common composting facility that cater to its 17 wards. A 40-member Green Task Force oversees all waste management activities.

Management of dry discards: This comprises of solid material that is discarded because it has served its purpose or is no longer useful. As many as 8424 houses are covered through door-to-door collection of such waste. While the 8132 households pay a fee of Rs. 50 per month, the 491 institutions pay Rs.100 a month as collection charges.

Two members from the Haritha Karma Sena (HKS or Green Taskforce) visit the households and institutions in each ward of the panchayat twice a month and collect all clean, dry and segregated discards. In addition, there are 62 wayside drop-boxes, 8 bottle-booths, 81 Mini-MCFs, 20 School bins, etc., which are placed at various spots across the Panchayat for people to drop in their discards.

Material collected by HKS are temporarily stored at Mini-MCFs situated in each ward of the GP and from there these materials are transferred to the MCF at GP level where it is segregated into 7-10 items of plastics, and different types of papers.

Plastics and paper are collected every month and other dry-discards such as glass, metal, e-waste, medicine-strips, footwear, and bags are collected as per a pre-determined calendar.

As for materials that need to be baled or shredded, they are transferred to the RRF where they are made appropriate for bulk transportation.

**Resource Recovery:** Having commenced door to door collection of dry discards in February 2018, the quantity of baled plastics sent for recycling so far is 278 tons; and the quantity of plastics shredded and sent for reuse is 9.20 tons while the quantity of rejects disposed through Clean Kerala Company (CKC) is 2.05 tons.

**Reduction strategies adopted:** In adherence of the Green Protocol, the Panchayat had bought 1000 Steel-plates and tumblers and has been providing them to the public for parties, events, or functions, thus making them refrain from the use of disposable crockery and cutlery.

**Revenue Generation:** The GP earns considerable revenue from the user-fee or collection charges from households and institutions; and from the production and marketing of alternative products (cloth and paper-bags); renting of reusable crockery (steel-plate, tumblers); organic farming within the MCF, RRF premises; sale of compost generated at the public waste composting facilities; and sale of dry-discards from MCF and RRF.

The average monthly remuneration earned by each Haritha Karma Sena is Rs. 8500 per month.

As far as investments are concerned, the GP has invested Rs.3,50,000 for establishing MCF; Rs.31,00,000 in RRF (Rs. 1958080 by Block Panchayat and Rs.1142220 by Grama Panchayat); Rs. 9,82,943 for baling and shredding facilities; and Rs 28,12,350 on Mini-MCFs, Collection bins, Bottle-booths, and Drop-boxes.

**Support from Suchitwa Mission:** Suchitwa Mission which is the Technical Support Group (TSG) in the

waste management sector under the Local Self Government Department, Government of Kerala, is responsible for providing technical and managerial support to the Local Self Governments of the State. In the case of Bedadukka GP, Suchitwa Mission has provided timely assistance and technical guidance to take up comprehensive SWM projects that best suited their needs.

It conducts project clinics at block level for planning and formulation of projects. All GPs under the block purview attend such project-clinics.

Projects are implemented through government accredited agencies which Suchitwa Mission has approved as service providers. Around 64 agencies are empanelled at state-level as service-providers to aid LSGIs for implementing source level wet waste management projects.

For providing support to GPs for establishment of dry-waste management processes, agencies are empanelled as Haritha Sahaya Sthapanam. They support the GPs in arranging logistics for D2D collection, management of Haritha Karma Sena, and establishing forward linkages, etc.

**RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.03.2021**

RECEIPTS	Amount (Rs.)	Current Year 2020-21	PAYMENTS	Amount (Rs.)	Current Year 2020-21
Opening Balance		112,650,673			
<b>Plan Fund</b>			<b>Plan Fund</b>		
Grant - Government of Kerala- Rural		290,451,053	<b>Suchitwa Keralam Rural</b>		
Grant - Government of Kerala- Urban		102,796,219	Solid waste management	4,338,663.00	
			Source level Treatment	11,564,241.00	
Refund from GPs		3,126,010	Liquid Waste Management	4,295,401.00	
Refund from Municipality		225,000	Reconstruction of Toilets damaged due to floods	1,948,760.00	
			Premonsoon Cleaning Campaign	227,881,004.00	
			Administrative Cost	32,519,273.00	
			Technical advise for rural civic amenities	9,000.00	
			IEC & Capacity building	7,894,711.00	290,451,053
			<b>Suchitwa Keralam Urban</b>		
			Solid waste management	6,978,880.00	
			Source level Treatment	13,665,343.00	
			Reconstruction of Toilets damaged due to floods	5,839,654.00	
			Premonsoon Cleaning Campaign	56,124,006.00	
			IEC & Capacity building	2,488,336.00	













**SUCHITWA  
MISSION**  
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