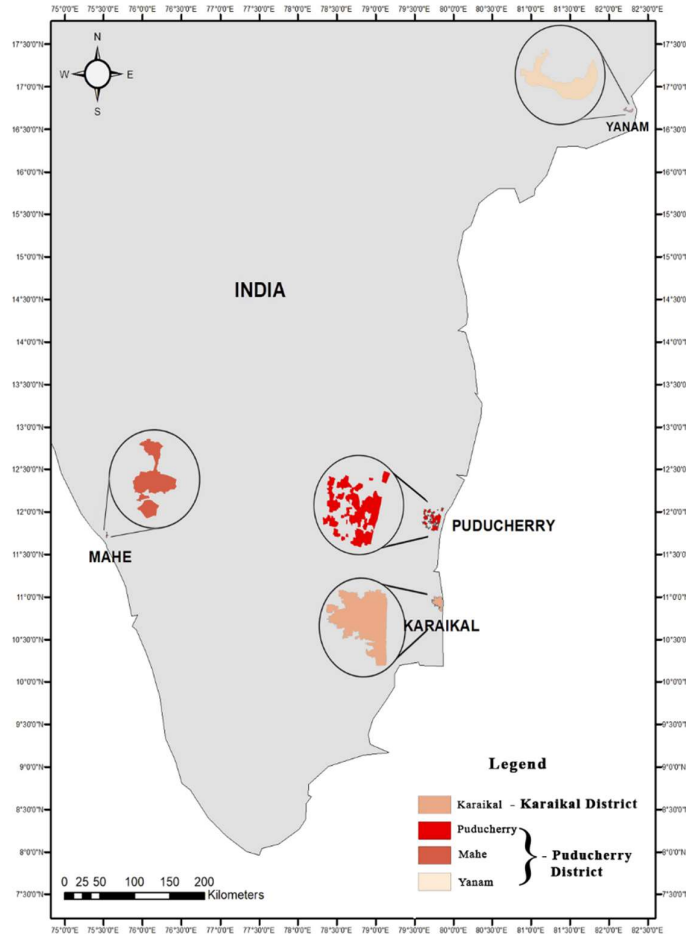


STATE ENVIRONMENT PLAN

Union Territory of Puducherry



December 2021



Department of Science, Technology and Environment
U.T. of Puducherry
E-Mail: dste.pon@nic.in

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1.0 State Profile

The Union Territory of Puducherry was formed out of erstwhile French colonies of Southern India consists of two districts, viz., Puducherry and Karaikal. Puducherry district comprises Puducherry, Mahe and Yanam regions and Karaikal district comprises of Karaikal region.

Among the three regions of Puducherry district, Puducherry is the largest region with total geographical area of 290 sq.kms. It lies along the east-coast of southern India bounded by the state of Tamil Nadu and consists of 12 scattered areas lying in between 11°42' to 12°30' N and 76°36' to 79°53' E.

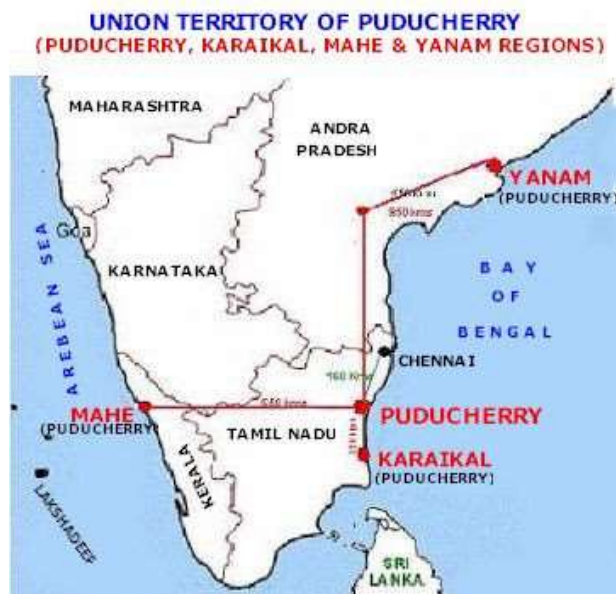


Figure 1: Four regions of U.T. of Puducherry

Yanam is a coastal enclave located at distance of about 800 km north east of Puducherry region, in the state of Andhra Pradesh. It lies between 16°42' to 16°46' N and 82°11' to 82°19' E, covering an area of 30 sq.km.

Mahe is a small coastal enclave located at a distance of about 650 km south west of Puducherry region, in the state of Kerala. It lies between 11°42' to 11°43' N and 75°31' to 75°33' E, and occupies a small land area of 9 sq.km.

Karaikal is located in the tail end of Cauvery River delta basin, 135 kms away from Puducherry. Karaikal is bounded on the North by Mayiladuthurai district, on the South by Nagapattinam district and on the west by Thiruvarur district of Tamil Nadu state and on the East by the Bay of Bengal. The total geographical area of the district is 157 Sq.Kms. It is located between 10°49' and 11°01' N, and 79°43' and 79°52' E. The headquarters of the district is Karaikal town

Puducherry, is the most famous symbol of French heritage and rule in India. Puducherry region became a French Colony in 1674. Mahe came under French regime in 1721, Yanam in 1731 and Karaikal

in 1738. The French held control of the region until Puducherry, Karaikal, Mahe, and Yanam were merged with Indian Union de facto on November 1, 1954 and Union Territory of Puducherry was constituted. Union Territory of Puducherry was treated as one district i.e., Puducherry district for administrative purpose till May 2005. Later in June 2005, Karaikal region of the Union Territory of Puducherry was created as a new district.

All the four regions of the Puducherry district are coastal flat plains with many backwaters. Mahe is bounded by a stretch of calcareous hills on the east while there are no hills in the other two regions. The sea side town of Puducherry is the capital of Puducherry District.

Puducherry is known for its French heritage and spirituality, and it is a destination for those seeking leisure and serenity. The city has many colonial buildings, churches, temples and statues which, combined with the town planning and French style avenues in the old part of town, still preserve much of the colonial ambiance.

a. Administrative Set-up

Puducherry District

Puducherry Town is the capital town of Puducherry Union Territory and Head Quarters of Puducherry District comprising of Puducherry, Mahe and Yanam regions.

For revenue administration purpose, Puducherry region is subdivided into 2 revenue sub divisions viz. Sub-Division (Revenue) South and Sub-Division (Revenue) North. At sub-division level, revenue administration is controlled by the Sub-Collector / Deputy Collector (Rev) who shall report to the District Collector. The region is further divided into 4 taluks viz. Puducherry, Ozhukarai, Bahour and Villianur and further sub divided into 11 Firkas and 81 Revenue villages. At the taluk level, Tahsildars look after land development and revenue collection of lands, law and order. They are also designated as Executive Magistrates.

Mahe region is treated as one sub-taluk consisting of 5 revenue villages. Similarly, entire Yanam region is considered as one sub-taluk with 6 revenue villages. Administration in these 2 regions is controlled by the Regional Administrators (Sub-Collector / Deputy Collector) who reports to the District Collector.

	Puducherry	Mahe	Yanam
Number of Revenue Sub-Divisions	2 Nos. Sub-Division (Revenue) South and Sub-Division (Revenue) North.	1 No. Sub-Division (Revenue) Mahe	1 No. Sub-Division (Revenue) Yanam
Number of Taluks / Sub-Taluks	4 Nos. Puducherry Taluk, Oulgaret Taluk, Villianur Taluk and Bahour Taluk	1 No. Mahe Sub-Taluk	1 No. Yanam Sub-Taluk
Firka (i.e. Circles) and Revenue Villages	11 Firka and 81 Revenue Villages	1 Firka and 5 Revenue Villages	1 Firka and 6 Revenue Villages

Table 1: Revenue subdivisions of Puducherry District

Karaikal District:

Karaikal district consists of two taluks namely Karaikal and Thirunallar Taluks. Karaikal Taluk consists of both rural and urban areas. It is thickly populated Taluk with a total population of 1,44,200 persons while Thirunallar Taluk is entirely rural and it is the least populated Taluk of the district with a total population of 56,022 persons. The Taluks are subdivided into 6 Firkas and 37 villages for revenue administration. Revenue administration of the district is controlled by the Sub-Collector / Deputy Collector (Rev) who shall report to the District Collector. At the taluk level, Tahsildars look after land development and revenue collection of lands, law and order. They are also designated as Executive Magistrates.

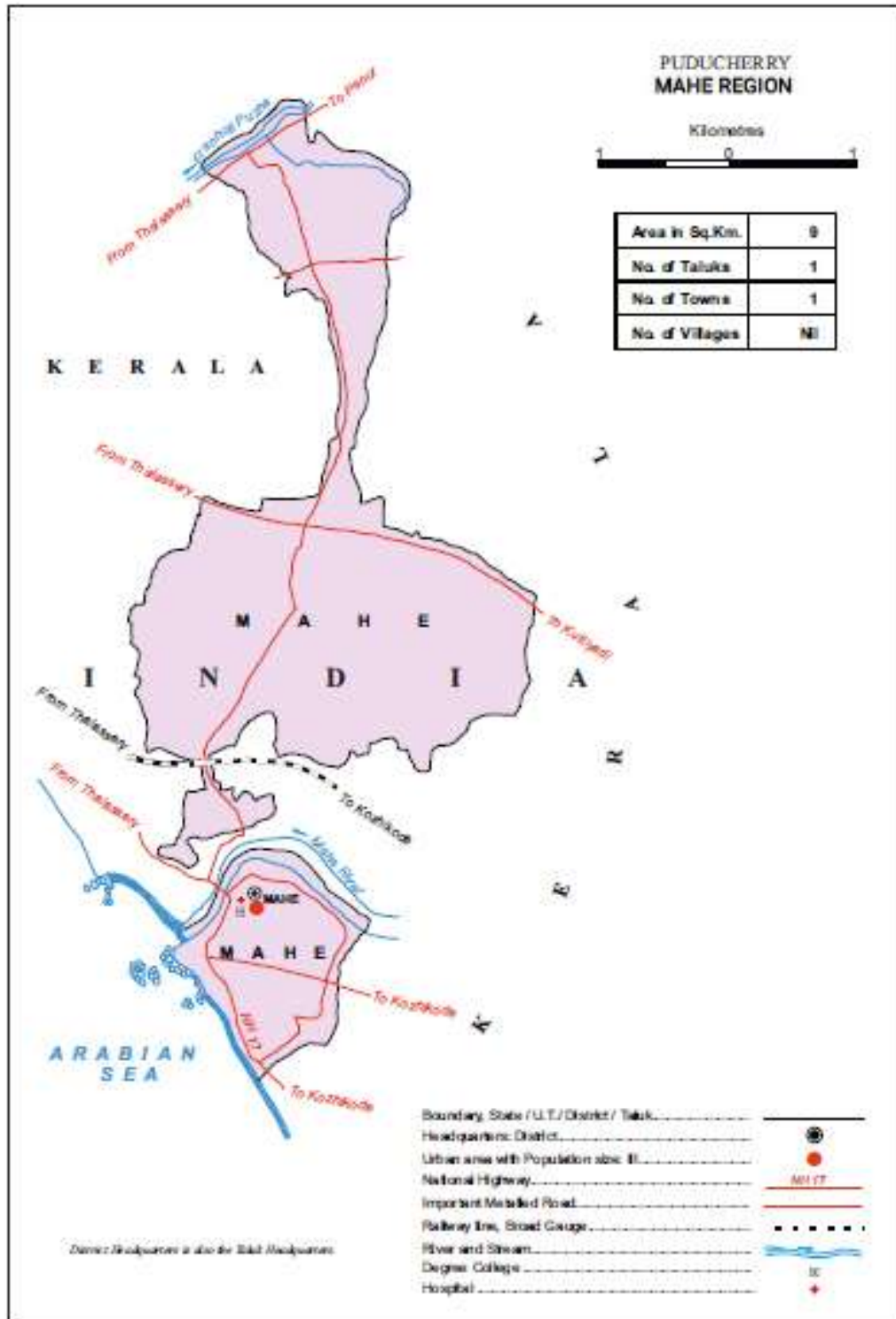


Figure 3: Map of Mahe region

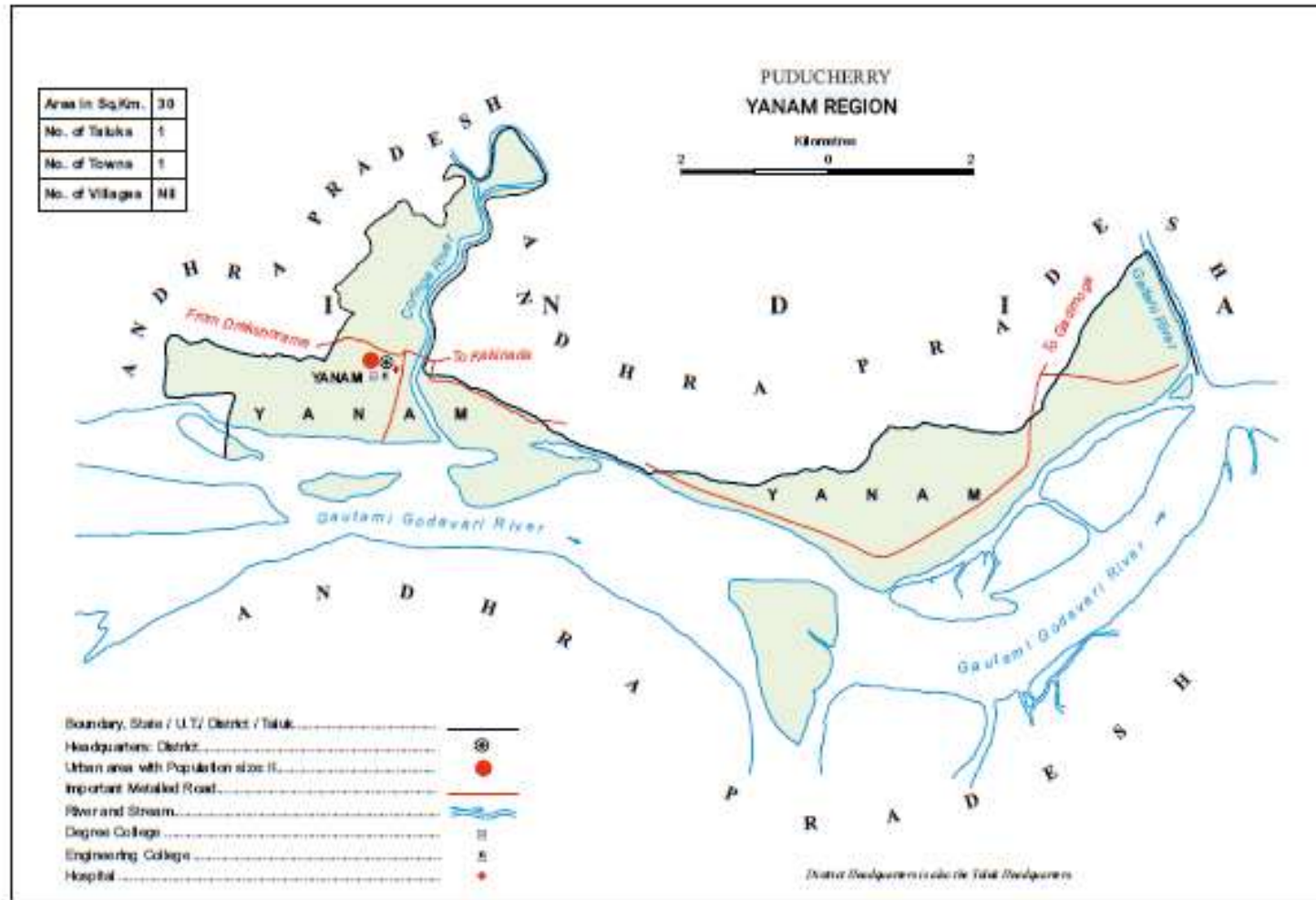


Figure 4: Map of Yanam region

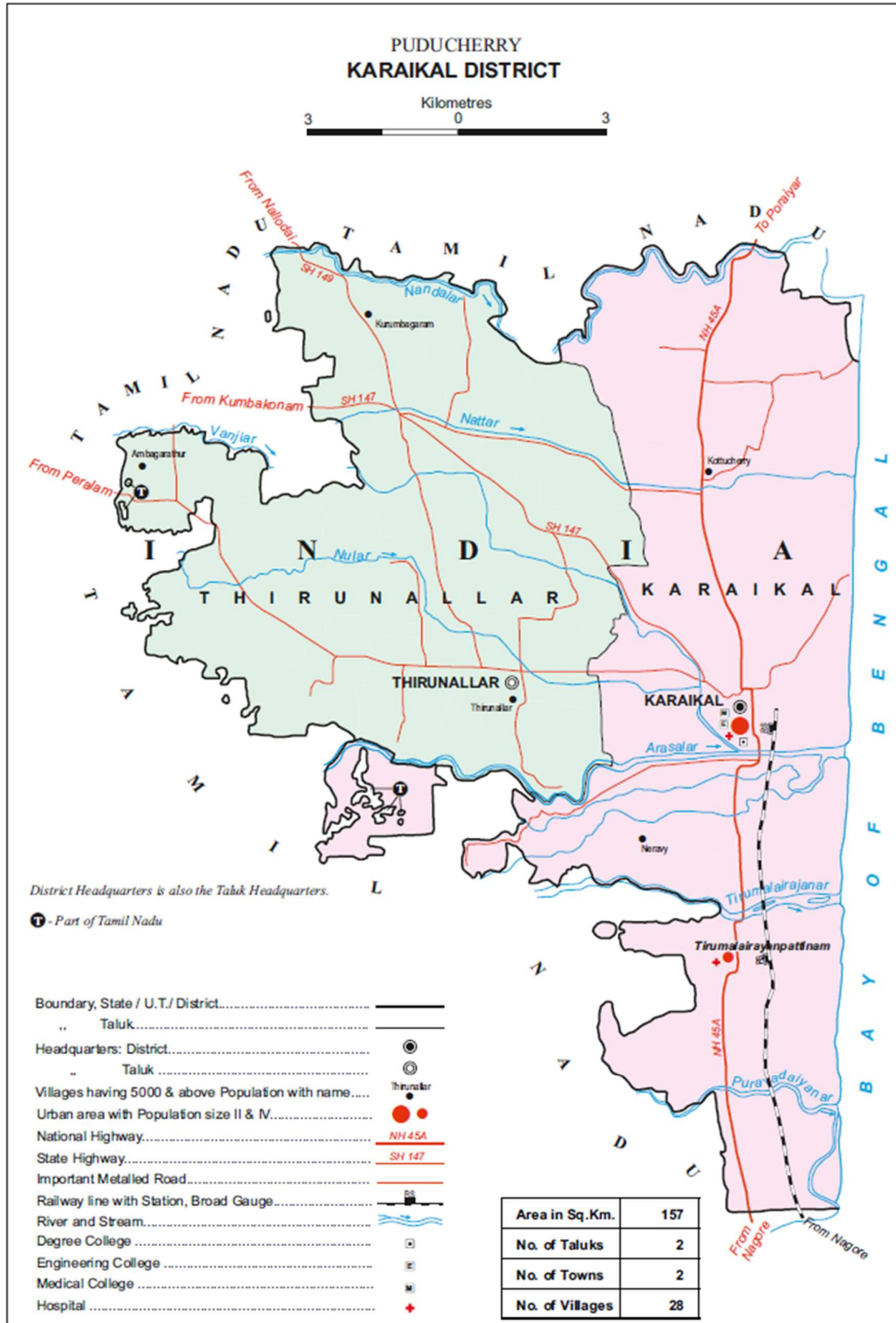


Figure 5: Map of Karaikal region

b. Local institutions

Puducherry District:

For local administration purpose the district is divided into Municipality for urban areas and Commune Panchayats for rural areas. There are 5 Municipalities and 10 Commune Panchayats in Puducherry Union Territory as per list given in Table 2. Commissioners are the administrative head of the Municipalities and Commune Panchayats. Their main function is to ensure availability of basic civil amenities like safe drinking water, sanitation to the public. Maintenance of roads, bridges and water bodes like lake, canal and ponds, collection of property taxes, registration of birth and death, etc. are also part of their job. The Director (LAD) is monitoring the functioning of Municipality/Commune Panchayat in the district.

Urban Divisions of Local Administration				
S. No.	District	Name of local body	Area, Sq.km.	No. of Wards / Village Panchayats
1	Puducherry District	Puducherry Municipality	19.54	33
2		Oulgaret Municipality	34.55	42
3		Mahe Municipality	9	10
4		Yanam Municipality	30	14
5.	Karaikal District	Karaikal Municipality	35.20	18
Rural Divisions of Local Administration				
1	Puducherry District	Ariyankuppam Commune Panchayat	24.39	14
2		Bahour Commune Panchayat	54.81	14
3		Mannadipet Commune Panchayat	64.33	18
4		Nettapakkam Commune Panchayat	30.62	11
5		Villianur Commune Panchayat	65.99	24
6	Karaikal District	Kottucherry Commune Panchayat		05
7		Neravy Commune Panchayat		04
8		Nedungadu Commune Panchayat		04
9		T.R. Pattinam Commune Panchayat		05
10		Thirunallar Commune Panchayat		09

Table 2: Urban and rural divisions of local administration in Puducherry Union Territory

Puducherry Union Territory has 6 Statutory town and 4 Census towns. The details status of the towns in Puducherry Union Territory are given in table below.

S. No.	District	Name of the Town	Status	Size Class	Population
1	Puducherry District	Puducherry	Municipality	I	2,44,377
2		Ozhukarai	Municipality	I	3,00,104
3		Villianur	Census Towns	III	34,383
4		Kurumbapet	GP+OG	III	32,871
5		Ariankuppam	Census Town	III	29,808
6		Manavelly	Census Town	IV	15,666
7		Mahe	Municipality	III	41,816
8		Yanam	Municipality	III	55,626
9	Karaikal District	Karaikal	Municipality	II	86,838
10		Thirumalairayanpattinam	Census Town	IV	11,264

Table 3: Status of Towns in Puducherry Union Territory

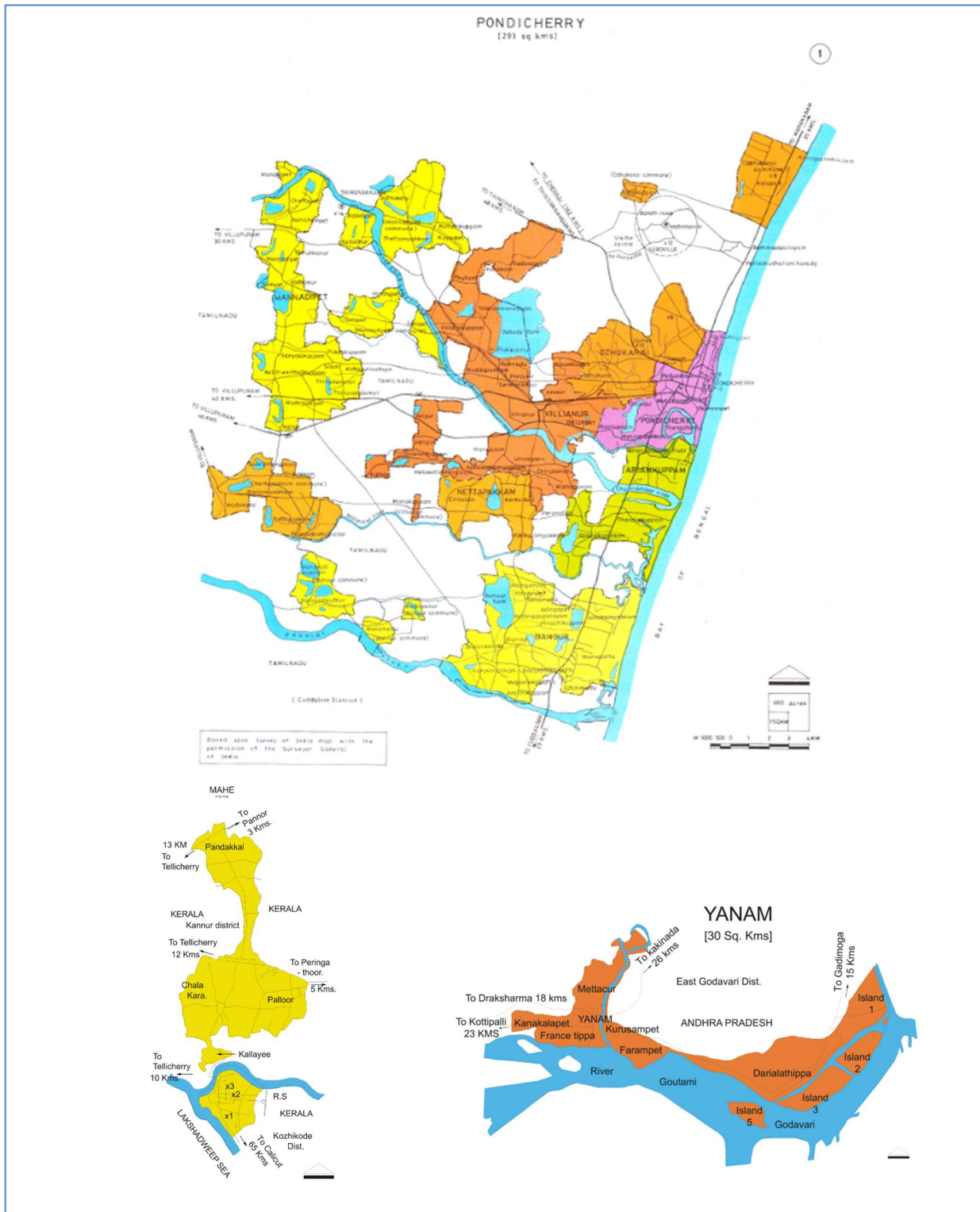


Figure 6: Local administration map of Puducherry District

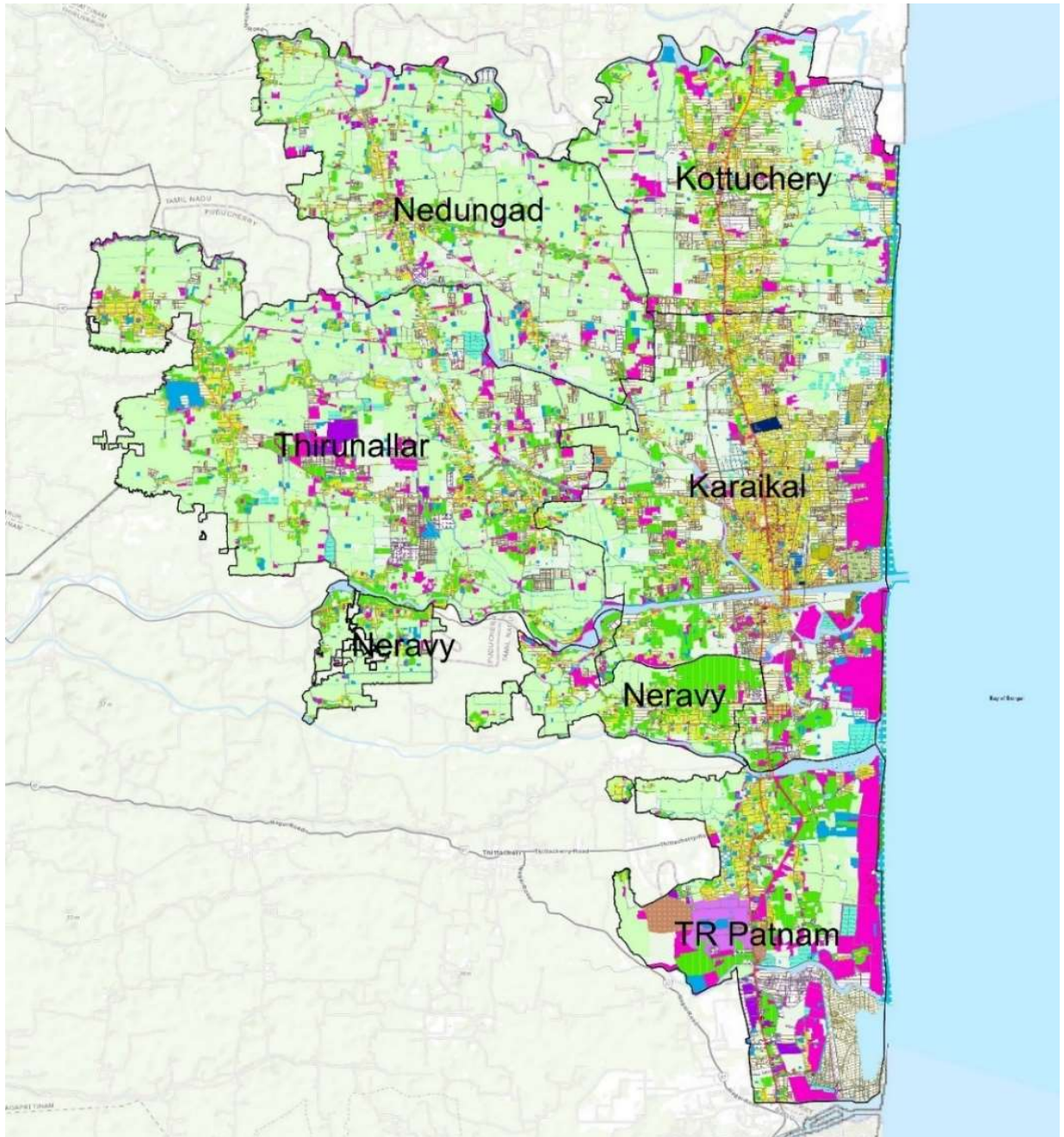


Figure 7: Local administration Map of Karaikal District

c. Natural Resources

Water bodies

Rivers

Puducherry region is intersected by the deltaic channels of River Gingee and River Pennaiyar and other streams forming the two main drainage basins interspersed with lagoons, lakes and tanks. There are 13 canals of which 4 canals are having the length of 11 kms, 2 are having the length of 7 kms and the rest are less than 5 km. The Suthukeny canal, Authuvoikal (Pillaiarkuppam) Canal, Korkadu feeding canal, Sitheri canal, Bangaru canal, Mangalam (Guduvaiyar) canal are some of the channels available for irrigation in this region. They receive water from Gingee and Pennaiyar rivers.

Yanam is a flood plain area where the mighty Godavari River deposits fertile alluvium since long back. River Godavari originating from the Western Ghat and flowing towards east through Karnataka and Andhra Pradesh joining Bay of Bengal along Southern boundary of this tiny land. It immensely helps the irrigation system of Yanam through various canals. Apart from River Godavari, the River Coringa runs from north to south through Yanam joining Godavari also irrigates the area through its canals.

Mahe is a tiny land with low mounds and hills having numerous storm water drainages. The main river in the region is River Mahe flowing towards west and emptied at Arabian Sea. Mahe River is used for navigation and fishing purpose.

Karaikal region is completely covered by the distributaries of Cauvery River and forms a part of its fertile delta basin. Karaikal once served as a traditional river port till 19th century through the River Arasalar. The district gets most of its water required for irrigation from the network of 7 rivers flowing through the region. Among the above rivers that flows thorough Karaikal district, Arasalar is the largest one. The river enters Karaikal region, a little East of Akalanganni. It forms the natural boundary line separating Neravy Commune from Thirunallar on the North-West and Karaikal on the North-East. The Nattar, branching off from Arasalar at Sakkottai in Thanjavur District, runs a distance of 11.2 km. in a South-East direction across Nedungadu and Kottuchcherry Communes before emptying itself into the sea. The Vanjiyar fed by Arasalar, takes its course along the Northern boundary of Thirunallar Commune, drops on a South-East curve towards Karaikal Commune and merges with the Arasalar, South-East of

Karaikal town after covering a distance of about 9 km. The Noolar, also fed by the Arasalar, runs a distance of 13.77 km. before it joins Vanjiyar North-East of Karaikal town. The Pravadayananar and the Thirumalairajanar are the branches of Kodamurutti. Pravadayananar runs through Thirumalairayan Pattinam Commune for a distance of 5.3 km. before it empties itself into the sea, South-East of Melvanjiyur. The flow of Thirumalarajanar which forms the natural boundary line between Neravy and Thirumalairayan Pattinam Communes runs a distance of 5.13 km. before it enters the sea, North of Pattanachcheri. The Nandalar takes off from Virasolan and runs across the Northern boundary of the region through Nedungadu and Kottucherry Communes for a distance of about 15.15 km. before it finds its outlet into the sea a little South of Tarangambadi.

S. No.	Region	Name of the River	Length (Km)
1	Puducherry	Gingee /Sankarabarani	34
2		Pennaiyar	6
3		Guduvaiuyar	19.3
4		Pambaiyar	13
5		Malatar	10
6	Mahe	Mahe	1.9
7	Yanam	Gautami Godavari	
8		Coringa	
9	Karaikal	Nandalar	15.2
10		Nattar	12.6
11		Vanjiyar	12.3
12		Noolar	16.6
13		Arasalar	11.76
14		Thirumalairajanar	10.22
15		Pravadayananar	3.35

Table 4: Rivers of Puducherry Union Territory

Tanks and Ponds

Puducherry region is accomplished with large number of tanks and ponds. There are 59 system tanks (i.e. tanks that are connected to river systems) and 25 non-system (rain fed) tanks which irrigate about 6600 hectares of land. The system tanks receive supply from the two rivers and three major tributaries. Water from the rivers and tributaries are conveyed to the tanks through feeder channels. Apart from the 25 non-system tanks there are nearly 609 ponds that can hold rainwater. Much of the rainfall runoff can be stored in the 84 tanks.

Unlike Puducherry region, Yanam and Mahe regions are not having much lakes / ponds. Farempeta pond (3780 sq.m.) and Kurusampeta pond (3634 sq.m.) are the two ponds in Yanam region.

In Mahe, there are 31 temple ponds and few farm ponds.

Karaikal region is also accomplished with large number of tanks and ponds. In Karaikal region, surface water storage is emphasized traditionally. Surface flow system or water bodies have sustained the Karaikal agriculture and acts as a bulwark against salt water intrusion. There are around 549 tanks and ponds as per the survey of Revenue and Agriculture Department which is huge in numbers for a small district with 157 sq. kms area. These water bodies had proper inlet and outlet interconnected by network of irrigation channels with cascading plan for draining of water: One pond fills – overflows - next pond fills – overflows and so on. For Centuries, these water bodies played a vital role in ensuring water security to Karaikal and surrounding areas and were once the main source of water for bathing, cultivation and other purposes. In urban localities ponds work as source of drinking water, absorption of flood water and a conduit for ground water recharge. In order to augment the water resources of the district the following lakes were additionally created in the recent years:

1. Nallambal lake - 77.64 Acres
2. Chettikottagam lake - 15.22 Acres
3. Padutharkollai lake - 35.43 Acres
4. Mini lake at Polagam - 12.956 Acres
5. Tank at Polagam - 15.459 Acres
6. Kazhugumedu lake - 9.884 Acres

Availability of water resources

Puducherry region

The annual water availability of the Puducherry region is assessed to be 184.975 MCM, out of which share of surface water is 60.905 MCM (32.92%) and ground water is 124.07 MCM (67.08%). The region mainly depends on ground water for water supply. Urban water supply is maintained through more than 150 bore wells. Main water resource is Muthirapalayam aquifer.

In Puducherry region, the main source of irrigation prior to 1987 was 84 nos. of tanks and lakes which were supplemented by 3,000 numbers of shallow tube wells. The practice of conjunctive usage of surface and ground water was neglected since middle of the 1980's and thereafter the entire requirement of water is being met out from groundwater leading to neglect of surface water resources. The estimation of groundwater resources for Puducherry region has shown that the region is over

exploited. Over extraction of ground water has caused sea water intrusion and changes in quality of ground water. Judicial use of ground water, augmentation of surface water supply, integrated water resource management and measures for rain water harvesting need to be focused on for sustaining the water resources of the region.

Yanam and Mahe region

Yanam region depends on surface water from Godavari River for its water supply. 3 Treatment plants (4 MLD, 3 MLD, 2 MLD) are in use to treat water. Further, about 30 cusecs of water is supplied to Yanam region by Andhra Pradesh Government from the neighboring district. In Mahe region, ground water cannot be tapped due to the hilly terrain of the region and water is supplied by Kerala Water Authority from Anjarakandy System in the neighboring district of Kerala.

Canal irrigation system is the only source of irrigation being practiced in the Yanam region. There is no irrigation system in Mahe as it is a hilly area and the rivers flowing in the district are not suitable for irrigation purpose. Few farmers use ponds for irrigation purpose.

Karaikal region

The main source of water for Karaikal District are Cauvery Water from Mettur Dam, Monsoon rains (North East Monsoon, South West Monsoon & Summer Rain) and traditional Ponds / Tanks / Wells / Lakes. Karaikal district gets most of its water for irrigation and water supply from the 7 distributaries of Cauveri River flowing through the region. Canal irrigation is most predominant in Karaikal district. There are 98 canals and channels in the district which provide irrigation to around 8,000 Hectares of land available for cultivation. Whenever the Mettur Dam has sufficient water and opened for irrigation one can see these canals and channels with full of water. Failing monsoon and insufficient release of water from Mettur Dam causes tremendous stress on the water resource of the district.

The ground water resources in the region have not been fully developed as it is occupied by alluvium consisting of sands and clays. Karaikal town gets its water by means of a battery of a shallow interconnected open wells and an infiltration gallery in the bed of Arasalar. A few villages between Akalanganni and Karaikal also get their water supply from this source. The town faces difficult water supply position during the months of April-June, when there is no flow in the Arasalar.

The quality of groundwater in the eastern part is poor and unfit for development in view of its saline nature. The western part of the district has comparatively better-quality water both in shallow Alluvial aquifers and in deeper Cuddalore sandstone aquifers and these aquifers are being developed by shallow tube wells as well as by deep tube wells respectively.

The non-availability of surface water in canal in recent times has resulted in groundwater being used as a supplementary source. The groundwater resources of the region are periodically assessed by CGWB and Groundwater Unit of Department of Agriculture, U. T. of Puducherry and the ground water potential of the district has been categorized as “Safe”.

Forest coverage

Puducherry Union Territory does not have any natural forests inside its jurisdiction. As per the Champion & Seth Classification of Forest Types (1968), the forests in Puducherry belong to Type Group ‘Littoral & Swamp Forests’. Recorded Forest Area (RFA) in the Union Territory is 13 sq km of which 2 sq km is Protected Forest and 11 sq km is Unclassed Forests. The Protected Area network in the UT has one Bird Sanctuary known as ‘Oussudu Lake’ covering an area of 800 hectares in Puducherry and neighboring Tami Nadu region.

The forest department is taking up plantations on Government lands regularly and encourages agroforestry. The farmers of Puducherry are now cultivating Casuarina spp. in the area of 1,600 hectares out of net cultivable area of 15,000 hectares.

Recently the Government of Puducherry has constituted Puducherry Union Territory Wetland Authority for conservation of existing flora and fauna in the wetlands of the UT. The department has developed a small tree arboretum in its department premises wherein 80 species are being accommodated with display of their usages. An urban forest trail has been created and opened for public visit from December 2018 onwards.

The Union Territory is endowed with a rich diversity of wild life, Avi fauna (birds) and Reptiles in particular. The main mandate of the Forest department is maintenance of green cover and taking measures to increase the area under forest.

Mangrove vegetation is seen to some extent in the estuaries and along the sides of Ariyankuppam river in Puducherry region and Gouthami river near Guirempeta in Yanam region. Some of the important mangrove species in Pondicherry are *Rhizophora apiculata*, *Rhizophora mucronata*, *Avicennia marina*, *Bruguiera cylindrica*, *Bruguiera gymnorrhiza* (Rhizophoraceae), *Acanthus ebracteatus*, *Acanthus illicifolius* (Acanthaceae) etc.

Karaikal region is located close to the popular Muthupet Mangrove Forest area in Tamil Nadu. The district was devoid of naturally occurring mangroves in the past. Post Tsunami, manmade mangroves were developed in about 10 Hectares of land along the estuary portion of River Arasalar by M.S. Swaminathan Foundation and funded by the Department of Tourism and, Development, Forest and Wildlife and Fisheries of Pondicherry during 2009- 10. Currently, the area of mangroves is 32. 3 ha, which harbours six species of true mangrove plants and 108 species of mangrove associated plants.

d. Geography & Demography

S. No.	Particulars	U.T.	Puducherry District			Karaikal District
			Puducherry	Mahe	Yanam	Karaikal
1	Geographical area, Sq. kms.	490	294	9	30	157 Sq. kms.
2	Total Population	12,47,953	9,50,289	41,816	55,626	2,00,222
3	Rural Population	3,95,200	2,93,080	-	-	1,02,120
4	Urban Population	8,52,753	6,57,209	41,816	55,626	98,102
5	Density of Population, persons / sq.km.	2547	3232	4646	1854	1275
6	Total Literacy Rate, %	85.8	85.4	97.9	79.5	87.1
7	Male Literacy Rate, %	91.3	91.2	98.6	82.8	92.4
8	Female Literacy rate, %	80.7	79.9	97.3	76.4	82.0
9	Sex Ratio, No. of females per 1000 males	1037	1029	1184	1038	1047
10	Total No. of Households	3,02,427	2,30,703	7197	13,308	51,219

Table 5: Significant geographic and demographic data based on 2011 Census

e.Land-use pattern

The classification of area by different types of land use for all the four regions of Puducherry Union Territory is given below:

S. No.	Classification	Area (in ha)
1.	Forest	0
2.	Area under Non-Agricultural uses	7107.93
3.	Barren and Uncultivable land	11.35
4.	Permanent pasture and other grassing land	0
5.	land under miscellaneous tree crops etc.,	339.27
6.	Cultivable waste land	755.27
7.	Fallow lands other than current fallows	987.01
8.	Current fallows	2032.54
9.	Net Area Sown	10425.4
	(a) Total Irrigated land area	9632.78
	(b) Total unirrigated land area	792.59
Total		21658.7

Table 6: Land use classification of Puducherry region, Census 2011

S. No.	Classification	Area (in ha)
1.	Forest	0
2.	Area under Non-Agricultural uses	237
3.	Barren and Uncultivable land	1
4.	Permanent pasture and other grassing land	0
5.	land under miscellaneous tree crops etc.,	2
6.	Cultivable waste land	25
7.	Fallow lands other than current fallows	4
8.	Current fallows	8
9.	Net Area Sown	593
Total		870

Table 7: Land use classification of Mahe region, Census 2011

S. No.	Classification	Area (in ha)
1.	Forest	0
2.	Area under Non-Agricultural uses	1189
3.	Barren and Uncultivable land	0

4.	Permanent pasture and other grassing land	0
5.	land under miscellaneous tree crops etc.,	480
6.	Cultivable waste land	17
7.	Fallow lands other than current fallows	84
8.	Current fallows	27
9.	Net Area Sown	594
	(a) Total Irrigated land area	278
	(b) Total unirrigated land area	316
Total		2391

Table 8: Land use classification of Yanam region, Census 2011

S. No.	Classification	Area (in ha)
1	Forest	0
2	Area under Non-Agricultural uses	3590.24
3	Barren and Un Cultivable land	0
4	Permanent pasture and other grassing land	0
5	Land under miscellaneous tree crops etc.,	184.46
6	Culturable waste land	1638.46
7	Fallow lands other than current fallows	874.65
8	Current fallows	533.73
9	Net Area Sown	5343.51
	(a) Total Irrigated land area	4341.47
	(b) Total unirrigated land area	1002.04
Total		12165.05

Table 9: Land use classification of Karaikal region, Census 2011

f. Climate

Puducherry and Karaikal region experiences a hot and tropical maritime type of climate characterized by small daily range of temperature, humid weather and moderate rainfall due to its geographical location closer to the sea. Summer lasts from April to early June, when maximum temperatures may reach 41 °C. The average maximum temperature is 36 °C. Minimum temperatures are in the order of 28–32 °C. This is followed by a period of high humidity and occasional thunder showers from June till September. The North-East monsoon sets in during the middle of October, and the regions gets the bulk of its annual rainfall during the period from October to December.

Yanam region enjoys the benefit of both South-West and North-East monsoon season. Mahe is comparatively cooler than the other regions of the Union Territory due to its geographical location. Around 77 per cent of the rainfall is received during the south-west monsoon because of its location in the windward side of the Western Ghats.

2.0 Indicative Gap Analysis and Action Plans for complying with Waste Management Rules

(i) Solid Waste Management

a. Current status related to solid Waste management

	Urban Local bodies	No. of Wards	No. of Households	Population	Solid Waste Generated TPD
1	Municipal corporations (Nagar Nigam or Mahanagar Palika)	Nil	Nil	Nil	Nil
2	Municipalities (Nagar Palikas):				
	Puducherry Municipality (PM)	33	60638	2,44,377	172
	Oulgaret Municipality (OM)	42	90140	3,00,104	166
	Karaikal Municipality	18	22503	86838	40 MT
	Mahe Municipality (MM)	10	10152	41,816	4
	Yanam Municipality (YM)	14	14005	55,626	16
3	Nagar panchayats (Town area Councils)	Nil	Nil	Nil	Nil

	Local Bodies	District	No. of Village panchayats	No. of House holds	Population	Solid Waste Generated TPD
1	Block /Taluk / Mandal Tehsils		-	-	-	-
2	Village/Gram Panchayats:					
	Ariyankuppam Commune Panchayat (ACP)	Puducherry	11	6418	72,055	22
	Bahour Commune Panchayat (BCP)		15	12438	68,757	24
	Mannadipet Commune Panchayat (MCP)		16	20245	86,500	26
	Nettapakkam Commune Panchayat (NCP)		11	12438	51,718	14
	Villianur Commune Panchayat (VCP)		18	14122	1,26,778	34
	Kottucherry Commune Panchayat		Karaikal	05	5789	23186
	Neravy Commune Panchayat	04		3401	12841	5.5 MT
	Nedungadu Commune Panchayat	04		4494	17146	3.5 MT
	T.R. Pattinam Commune Panchayat	05		5187	21335	5.0 MT
	Thirunallar Commune Panchayat	09		10380	38876	5.0 MT

b. Identification of gaps and Action plan:

S. No.	Action points for Municipalities / Commune Panchayats	District	Gap identification	Action Plan	Responsible Agencies	Timeline for completion of action plan
1.	Segregation					
(i)	Segregation of waste at source	Puducherry	In Puducherry Urban Agglomeration Area (PUAA) covering PM, OM, VCP and ACP 30% source segregation has been achieved. In Mahe Municipality, 80% source segregation is practiced. In Yanam Municipality 40% source segregation has been achieved. In all other commune panchayat villages source segregation is yet to be initiated.	Preparation of Action Plan to achieve 100% segregation at source in PUAA and execution of accountable Door to door collection with segregation at source by introduction of QR codes. Budget: Rs. 4.2 Cr.	Commissioners of OM, PM, VCP & ACP & M/s. Swachatha Corporation	Oct 2022
				Preparation of Action Plan to achieve 100% segregation at source in Mahe Municipality and execution of accountable Door to door collection with segregation at source by introduction of QR codes. Budget: Rs. 0.35 Cr.	Commissioner of Mahe Municipality & M/s Northamps ENV Solutions, Cochin	Oct 2022
				Preparation of Action Plan to achieve 100% segregation at source in Yanam Municipality and execution of accountable Door to door collection with segregation at source by introduction of QR codes. Budget: Rs. 3 Cr.	Commissioner of Yanam Municipality & H.R Square LLP, Hyderabad	April 2022
				DPR for achieving 100% waste segregation at source in all commune panchayats; covering infrastructure requirement, policy / incentive measures, public participation, awareness	Commissioners of BCP, MCP, NCP Commune Panchayats	June 2022

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				programs, etc shall be prepared in line with the measures taken by ULBs and implemented in time bound manner.		
				Creating public awareness through information, education, and communication (IEC) campaigns and educating the waste generators to minimize waste, prohibit littering, promoting segregation of waste and recycling or reuse of segregated waste, in association with NGOs, SHGs, market associations and the like.	Commissioners of Municipalities and Commune Panchayats	Continuous activity
		Karaikal	100% waste segregation is implemented in all wards of Karaikal Municipality. Same need to be initiated by the village panchayats in rural areas.	(i) Enable waste segregation at source in village panchayats into wet (green bin) and dry (blue bin). Place appropriately coloured community bins.	Commissioners of all Commune Panchayats.	Dec 2022
				(ii) Door to Door sensitization by distributing pamphlets, mass media and NGOs.	Commissioners of Karaikal Municipality and all Commune Panchayats	Continuous activity
2	Sweeping					
(i)	Manual Sweeping	Puducherry & Karaikal	No gaps; All internal roads are covered for regular manual sweeping in the ULBs. In village panchayats manual sweeping is done in public and commercial areas.	-	-	-
(ii)	Mechanical Road Sweeping & Collection	Puducherry	Except Mahe, in all other ULBs mechanical road sweeping and collection is done in main roads.	Implementation of mechanical road sweeping and collection in Mahe Municipality. Budget: Rs. 1 Cr.	Commissioner of Mahe Municipality & M/s Northamps ENV Solutions, Cochin	Oct 2022

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		Karaikal	No gaps; Since the town is small and roads are narrow mechanical sweeping is not preferred	-	-	-
3	Waste Collection					
(i)	100% collection of solid waste	Puducherry & Karaikal	100% door to door collection of solid waste has been achieved in all the wards located in ULBs. In commune panchayats solid waste is collected through community bins placed in the streets.	-	-	-
(ii)	Arrangement for door-to-door collection	Puducherry & Karaikal	All wards in the ULBs are covered for door-to-door collection.	-	-	-
(iii)	Waste Collection trolleys with separate compartments	Puducherry & Karaikal	Adequate number of waste collection trolleys are available as per details in Annexure 1. In most areas the door to door collected waste is directly transferred to mini trucks, therefore, trolleys are not required.	-	-	-
(iv)	Mini Collection Trucks with separate compartments	Puducherry	Adequate number of Mini Collection Trucks are available as per details provided in Annexure 1. The local bodies in the rural areas	-	-	-

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			engage tractor trailers on rent for waste collection based on requirement.			
		Karaikal	Karaikal Municipality is having 23 Mini collection trucks and the commune panchayats in rural area are having 16 mini trucks as stated in the data sheet in Annexure 1. Tractor trailers are engaged on hire basis wherever mini trucks are not available. It is proposed to procure additional mini collection trucks.	Procurement of additional Mini Collection Trucks to be made; Karaikal – 5 Nos. Kottucherry – 2 Nos. Neravy – 1 No. Nedungadu – 2 Nos. T.R. Pattinam – 3 Nos. Thirunallar – 2 Nos. DPR shall be prepared for tendering to purchase necessary mini trucks for solid waste management in the district. The same will be implemented as per the DPR and time bound.	Commissioners of Karaikal Municipality and all Commune Panchayats.	Dec 2022
(v)	Waste Deposition centers (for domestic hazardous wastes)	Puducherry	Three domestic hazardous wastes deposition centers have been established by ULBs - one each in the RRP at Puducherry, Mahe and Yanam region. The collected waste is sent to authorized agencies for disposal.	ULBs shall establish a minimum of one domestic hazardous deposition center per 20 sq.km. or per ward, for ease of deposition of the users.	Commissioners of all Municipalities	Dec 2022
			One deposition center has been established by Ariyankuppam Commune Panchayat.	Commune Panchayats shall establish their own domestic hazardous deposition center or tie-up with the facilities available in nearby ULBs.	Commissioners of all Municipalities	Dec 2022
				Installation of incinerator of capacity 2 TPD, scalable to 5 TPD. Budget: Rs. 0.4 Cr.	Commissioners of Oulgaret & Puducherry Municipality & Director - LAD	Jan 2023
				All municipalities and commune panchayats shall tie-up with Common Bio-medical Waste Disposal Facility for disposal of domestic bio-medical wastes like sanitary napkins and pads.	Commissioners of all Municipalities and Commune Panchayat	Feb 2022

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			Other Communes are yet to establish HW Deposition centers. Puducherry and Oulgaret, Municipalities are proposing to install a common Incinerator for disposal of domestic bio-medical wastes like sanitary napkins and pads.			
		Karaikal	One Deposition Centre available at Karaikal. Establishing linkage with TSDF is under progress.	(i) Karaikal Municipality shall establish linkage with nearby TSDF located in Tamil Nadu and Karnataka for scientific disposal of domestic hazardous Wastes. Records on collection and disposal of domestic hazardous Wastes shall be maintained and shall be submitted to PPCC regularly.	Commissioner of Karaikal Municipality	Feb 2022
				All Commune Panchayats shall establish linkage with the Deposition Centre at Karaikal or their own Deposition Centre for Hazardous Waste. Records on collection and disposal of domestic hazardous Wastes shall be maintained and shall be submitted to PPCC regularly.	Commissioners of all Commune Panchayats.	Feb 2022
4.	Waste Transport					
(i)	Review existing infrastructure for waste Transport.	Puducherry	Adequate infrastructure is available for segregated waste transport in the ULBs. The detail of available infrastructure is given in	DPR shall be prepared for tendering to purchase waste collection trolleys and mini trucks necessary for segregated waste transport in the commune panchayats. The same shall be implemented as per the DPR and time bound.	Commissioners of all Commune Panchayats.	Dec 2022

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			Annexure 1. About 69 mini trucks are needed to be procured additionally for segregated waste transport in villages under the commune panchayats.			
		Karaikal	The existing fleet is not adequate for segregated waste transport.	DPR shall be prepared for tendering to purchase vehicles necessary for segregated transport in the district. The same will be implemented as per the DPR and time bound.	Commissioners of Karaikal Municipality and all Commune Panchayats.	Feb 2022
(ii)	Bulk Waste Trucks	Puducherry	Enough Bulk trucks are deployed by the Solid Waste Management Agencies in ULBs. 8 Bulk Trucks need to be procured for waste transport from villages under the Commune Panchayats.	DPR shall be prepared for tendering to purchase Bulk trucks necessary for waste transport in the commune panchayats. The same shall be implemented as per the DPR and time bound.	Commissioners of all Commune Panchayats.	Dec 2022
		Karaikal	7 Bulk trucks are available in ULBs. 3 additional need to be procured for ULB and 5 for village panchayats.	Additional Bulk Waste Trucks to be procured.	Commissioners of Karaikal Municipality and all Commune Panchayats.	Dec 2022
(iii)	Waste Transfer points	Puducherry	805 Waste Transfer points are available in the ULBs which is sufficient. 5 waste transfer points need to be established	Establishing waste transfer points in commune panchayats.	Commissioners of Bahour and Netapakkam Commune Panchayat	June 2023

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			in Bahour and Netapakkam Commune Panchayats.			
		Karaikal	No gaps; Waste Transfer points are not required in the District as they are directly transporting the collected solid waste from the town / village to the solid waste management facility located nearby	-	-	-
5	Waste Treatment and Disposal					
(i)	Wet-waste Management: On-site composting by bulk waste generators (Authority may decide on requirement as per Rules)	Puducherry	Most of the Municipalities and Commune Panchayats are yet to prepare a comprehensive inventory on the list of Bulk Waste Generators in their jurisdiction.	Inventory of Bulk waste generators to be prepared by local bodies with details of waste generation and onsite waste processing facilities.	Commissioners of all Municipalities and Commune Panchayats	Feb 2022
				Issue of direction for onsite composting / processing and ensuring compliance	Commissioners of all Municipalities and Commune Panchayats and Member Secretary - PPCC	April 2022
		Karaikal	Onsite composting is carried out by most of the bulk waste generators	Identification of non-complying bulk waste generators and providing the list to PPCC.	Commissioners of Karaikal Municipality and all Commune Panchayats.	Dec - 2021
				Issue of direction and ensuring compliance	PPCC	March - 2022
(ii)	Wet-waste Management: Facility for Biomethanation / Composting of wets waste.	Puducherry	At present a 1 TPD model Bio-methanation Plant is available at Kurumbapet RRP and Yanam. DPR for setting up of 200 TPD Compost	Establishing 200 TPD Compost Plant at Kurumbapet Budget: Rs. 3 Cr.	Commissioner – Oulgaret Municipality and Director - LAD	June 2023
				Establishing Bio-methanation plant in Yanam Budget: Rs. 30 Lakh	Commissioner of Yanam Municipality	Oct 2022

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			Plant for ULBs prepared and third-party appraisal obtained. Tender to be floated after reclamation of identified land at RRP Kurumbapet through Bioremediation which is under progress. In Yanam Municipality, a 1 TPD model Bio-methanation plant is available. Tender has been finalised for establishing Bio methanation plant. In Mahe Municipality, one composting facility is available at Cherukallayi. It is proposed to install one Bio-methanation plant for food waste. Facilities for wet waste management is not available in the Commune Panchayats.		and Director - LAD	
				Establishing Bio-methanation plant in Mahe Budget: Rs. 30 Lakh	Commissioner of Mahe Municipality and Director - LAD	June 2023
				Establishment of facility for wet waste management in other Municipalities and village panchayats.	Commissioner of all Commune Panchayats and Director - LAD	June 2023
		Karaikal	Bio-methanation and composting facilities are available with ULBs. Commune Panchayats have proposals for establishing the same	DPR preparation for wet waste management by establishing Bio-methanation or Composting facilities in village Panchayats.	Commissioners of all Commune Panchayats.	Feb 2022
				Establishment of facility Bio-methanation or Composting facilities in village panchayats for wet waste management.	Commissioners of all Commune Panchayats.	Dec 2022

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(iii)	Dry-Waste Management: Material Recovery for dry-waste fraction	Puducherry	<p>The waste collected in Puducherry Urban Agglomeration is disposed in the Resource Recovery Park at Kurumbapet where the recyclable materials are recovered and disposed to recyclers. One MRF facility is available at Mettupalayam Truck Terminal.</p> <p>In Mahe, one MRF is available at Pallore which needs to be upgraded.</p> <p>In Yanam, land has been earmarked for establishing RRP at UKV Nagar.</p> <p>Commune Panchayats are not having suitable facility for dry waste management at present.</p>	<p>DPR shall be prepared for establishing MRF at Mettupalayam Truck Terminal and Kurumbapet RRP through BOOT system and the same shall be implemented as per DPR in timebound manner.</p> <p>Budget: Rs. 5.81 Cr.</p>	Commissioners of Puducherry and Oulgaret Municipality and Director - LAD	June 2023
				<p>Establishment of RRP at UKV Nagar, Yanam</p> <p>Budget: Rs. 2.4 Cr.</p>	Commissioner of Yanam Municipality and Director - LAD	April 2022
				<p>MRF at Pallore, Mahe to be upgraded with proper infrastructure</p> <p>Budget: Rs. 1 Cr.</p>	Commissioner of Mahe Municipality and Director - LAD	June 2023
				<p>DPR shall be prepared for establishment of MRF in all commune panchayats and the same shall be implemented as per DPR in timebound manner.</p>	Commissioners of all Commune Panchayats and Director - LAD.	June 2023
		Karaikal	<p>At present one Material Recovery Facility (MRF) is functioning in Karaikal Municipality. The NGO called Hand in Hand Inclusive Development</p>	<p>(i) DPR preparation for establishing MRF in commune panchayats for dry waste management or establishing linkage with nearby facility in Karaikal Municipality.</p>	Commissioners of all Commune Panchayats.	Feb 2022
				<p>(ii) Establishment of MRF in all commune panchayats as per DPR.</p>	Commissioners of all Commune Panchayats.	Dec 2022

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			<p>and Services is engaged by Karaikal Municipality for door to door collection and segregation of dry waste at the MRF. Segregated plastic wastes are disposed for recycling. Karaikal Municipality has tied up with cement plant for coprocessing.</p> <p>Commune Panchayats are not having suitable facility for dry waste management at present.</p>	All Commune Panchayats shall associate with Karaikal Municipality for sending wastes for coprocessing cement kiln	Commissioners of all Commune Panchayats.	Feb 2022
(iv)	Disposal of inert and non- recyclable wastes: Sanitary Landfill	Puducherry	<p>Inert wastes are dumped in designated area within the RRP. An area of 5 Acres earmarked at RRP Kurumbapet for establishment of SLF. This will be taken up after reclamation of site by way of Bio mining which is under Progress. At Yanam, land has been earmarked for establishing SLF at the RRP at UKV Nagar.</p>	Construction of SLF at Kurumbapet Budget: Rs. 2.5 Cr.	Commissioners of Puducherry and Oulgaret Municipality and Director - LAD	June 2023
				Construction of SLF at Yanam Budget: Rs. 2.4 Cr.	Commissioner of Yanam Municipality and Director - LAD	April 2022
				Construction of SLF at Mahe Budget: Rs. 1 Cr.	Commissioner of Mahe Municipality and Director - LAD	June 2023
				DPR shall be prepared for constructing SLF in all commune panchayats and the same shall be implemented as per DPR in timebound manner.	Commissioners of all Commune Panchayats and Director - LAD.	June 2023

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			In Mahe, MRF is proposed in 1 acre of land available at Chalakkara.			
		Karaikal	Inert wastes are dumped in designated area within the MRF by Karaikal Municipality. At present Commune Panchayats are also dumping the solid waste in designated areas. Sanitary Land Fills (SLF) are proposed to be established by Karaikal Municipality and all commune panchayats.	(i) DPR preparation for construction of SLF in Karaikal Municipality and all Commune Panchayats, centralized SLF or establishing tie-up with neighboring SLF.	Commissioners of Karaikal Municipality and all Commune Panchayats.	Feb- 2022
				Establishment of SLF in Karaikal Municipality and all Commune Panchayats as per DPR.	Commissioners of Karaikal Municipality and all Commune Panchayats.	Dec - 2022
(v)	Remediation of historic / legacy dumpsite	Puducherry	Work started for remediation of legacy waste at RRP Kurumbapet. The Old dumpsite at Karuvadikuppam is to be remediated for which DPR is under preparation. At Mahe, there is no old dump site. In Yanam DPR is under preparation for bio mining of legacy waste. For all commune panchayats, feasibility	Remediation of legacy waste at Kurumbapet by Bio-mining. Budget: Rs. 42.7 Cr.	Commissioners of Puducherry and Oulgaret Municipality and Director - LAD	Dec 2022
				DPR preparation for remediation of legacy waste at Kurumbapet by Bio-mining and implementing in time bound manner. Budget: Rs. 15 Cr.	Commissioners of Puducherry and Oulgaret Municipality and Director - LAD	June 2024
				DPR preparation for remediation of legacy waste at Yanam by Bio-mining and implementing in time bound manner.	Commissioner of Yanam Municipality and Director - LAD	April 2023
				Feasibility studies of biomining of old dump sites to be carried out in all commune panchayats and the dump sites shall be given proper treatment.	Commissioners of all commune panchayats and Director - LAD	April 2023

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			of biomining of old dump sites need to be studied and proper treatment to be provided.			
		Karaikal	About 86000 MT solid waste is present in the old dump site at Paravipet. DPR for Bio-mining of the waste has been prepared and submitted for approval and financial sanction of government.	Implementation of Bio-mining project.	Commissioner of Karaikal Municipality	Dec 2022
(vi)	Involvement of NGOs	Puducherry	ULBs have not established a proper system for involving NGOs in solid waste management process and IEC activities.	Identification of NGO's shall be made in the district. The tie-up shall be made with NGOs to create more and more mass awareness among the public to implement the SWM Rules, 2016 in the district.	Commissioners of all Municipalities and Commune Panchayats.	March 2022
		Karaikal	Solid waste management contract of Karaikal Municipality has been entrusted with the NGO called Hand in Hand Inclusive Development and Services who are taking care of complete SWM operations and awareness creation.	Commune Panchayat shall also initiate involvement of NGOs on creating awareness	Commissioners of all Commune Panchayats.	June 2022

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(vii)	EPR of Producers: Linkage with Producers / Brand Owners	Puducherry	Linkage with producers and brand-owners for facilitating collection of packaging waste has not been established.	Identification of producers/brandowners or their PROs for collection of plastic waste shall be done and linkage shall be established with them as per SWM 2016 Rules.	Commissioners of all Municipalities and Commune Panchayats.	March 2022
		Karaikal	Linkage with producers and brand-owners for facilitating collection of packaging waste has not been established. M/s. Godrej Consumer Products Limited, Sethur Village, Thirunallar Commune has expressed its willingness to support local bodies on this.	(i) Identification of producers/brandowners or their PROs for collection of plastic waste shall be done and linkage shall be established with them as per SWM 2016 Rules.	Commissioners of Karaikal Municipality and all Commune Panchayats.	June 2022
				(ii) Linkage to be established with M/s. Godrej Consumer Products Limited, Sethur Village, Thirunallar Commune for financial support, infrastructure support or collection of package waste.	Commissioners of Karaikal Municipality and all Commune Panchayats.	June 2022
(viii)	Authorization of Waste Pickers	Puducherry	ID cards issued and list of authorized waste pickers maintained by Oulgaret Municipality. The same needs to be done by all other Municipalities and Commune Panchayats.	All Municipalities and Commune Panchayats shall also initiate authorization of waste pickers and issue of ID cards.	Commissioners of all Municipalities and Commune Panchayats.	March 2022
		Karaikal	Yes; ID cards issued and list of authorized waste pickers maintained by Karaikal Municipality	Commune Panchayats shall also initiate authorization of waste pickers and issue of ID cards.	Commissioners of all Commune Panchayats.	June 2022
(ix)	Preparation of own by-laws to comply with SWM Rules 2016	Puducherry & Karaikal	By-laws have been notified by the Municipalities for effective	-	-	-

		implementation of Solid Waste Management.			
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(ii) Plastic waste Management

(a) Current status related to Plastic waste management

Sl. No	Urban Local bodies	Estimated quantity of Plastic Waste Generated per day
1	Puducherry Municipality (PM)	10.68 MT
2	Oulgaret Municipality (OM)	10.98 MT
3	Karaikal Municipality	5.6 MT
4	Mahe Municipality (MM)	1.50 MT
5	Yanam Municipality (YM)	1 MT

Sl. No	Local Bodies	District	Plastic Waste Generated per day
1	Ariyankuppam Commune Panchayat (ACP)	Puducherry	1.0 MT
2	Bahour Commune Panchayat (BCP)		0.2 MT
3	Mannadipet Commune Panchayat (MCP)		2.0 MT
4	Nettapakkam Commune Panchayat (NCP)		0.07 MT
5	Villianur Commune Panchayat (VCP)		0.3 MT
6	Kottucherry Commune Panchayat	Karaikal	0.02 MT
7	Neravy Commune Panchayat		0.03 MT
8	Nedungadu Commune Panchayat		0.02 MT
9	T.R. Pattinam Commune Panchayat		0.3 MT
10	Thirunallar Commune Panchayat		0.3 MT

(b) Identification of gaps and Action plan:

S. No.	Action points for Municipalities / Commune Panchayats	District	Gap identification	Action Plan	Responsible Agencies	Timeline for completion of action plan
1.	Door to Door collection of dry waste including PW	Puducherry & Karaikal	No gaps; 100% door to door collection of dry waste is implemented by the ULBs.	-	-	-
2.	Facilitate organized collection of PW at waste transfer point or Material Recovery Facility.	Puducherry	For Puducherry and Oulgaret Municipality, One MRF facility available at Truck Terminal, Mettupalyam. Another MRF is proposed at RRP Kurumbapet. Transfer points are not required as waste is directly transferred to MRF from collection point due to small size of the town. At Yanam and Mahe, the plastic wastes are collected / segregated by the SWM agency engaged by respective Municipality and given to recyclers.	Implementation proper mechanism for organized collection, storage, transportation and channelization of plastic wastes to the recyclers, by all the commune panchayats.	Commissioners of all Commune Panchayats	Dec 2022
			Organized collection of plastic wastes is lacking in the villages falling under commune panchayats.	Identification of waste pickers and issuing ID cards.	Commissioners of all Municipalities and Commune Panchayats	March 2022
			Waste Pickers have been identified and ID cards have been issued by Puducherry Municipality. Also, steps are being taken to uplift the	Uplifting the livelihood of waste pickers by extending government welfare schemes and capacity building.	Commissioners of all Municipalities and Commune Panchayats	June 2022
				Empowering SHGs by way of capacity building for recycling plastic wastes	Commissioners of all Municipalities and Commune Panchayats	June 2022

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S. No.	Action points for Municipalities / Commune Panchayats	District	Gap identification	Action Plan	Responsible Agencies	Timeline for completion of action plan
			<p>livelihood of waste pickers by extending government welfare schemes and capacity building. The same shall be followed by all other Municipalities and Commune Panchayat.</p> <p>Empowering SHGs by way of capacity building for recycling plastic wastes is also required.</p> <p>Also, the local bodies are required to establish linkage with recyclers and producers and brand owners for establishing collection centers, recycling facility, etc.</p>	<p>Establish linkage with plastic recyclers</p> <p>Establishing linkage with Producers / Brand Owners / PROs for facilitating collection and disposal of plastic wastes.</p>	<p>Commissioners of all Municipalities and Commune Panchayats</p> <p>Commissioners of all Municipalities and Commune Panchayats</p>	<p>June 2022</p> <p>June 2022</p>
		Karaikal	The NGO called Hand in Hand Inclusive Development and Services is engaged by Karaikal Municipality for door to door collection and segregation of dry waste at the MRF. Segregated plastic wastes are disposed for recycling.	Organized collection and disposal of plastic wastes to be done by each commune panchayats. Linkage with NGOs, waste pickers, Producers and PROs shall be established to achieve this.	Commissioners of all Commune Panchayats	June 2022

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S. No.	Action points for Municipalities / Commune Panchayats	District	Gap identification	Action Plan	Responsible Agencies	Timeline for completion of action plan
3.	PW collection centers.	Puducherry	<p>PW is collected door to door along with dry waste and sent to RRP for segregation by the ULBs. At present no PW collection centers have been established in association with producers and brand-owners or their PROs.</p> <p>Pondicherry and Oulgaret Municipality proposes to set up of 10 incentivized collection centers. Mahe Municipality proposes to setup 5 incentivized collection centers and Yanam Municipality proposes to set up 1 incentivized collection center.</p>	Commissioners of all Municipalities and Commune panchayats shall set-up own PW collection centers and also involve producers and brand-owners or their PROs to facilitate setting up of collection centers. Adequate number of collection centers shall be established to cover all the wards / villages for ease of deposition by the users.	Commissioners of all Municipalities and Commune Panchayats	Dec 2022
		Karaikal	One plastic waste collection center is located in the MRF at Karaikal Municipality. Same need to be established in Commune Panchayats.	Commune panchayats shall set-up own PW collection centers and also involve producers and brand-owners or their PROs to facilitate setting up of collection centers.	Commissioners of all Commune Panchayats	June 2022

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S. No.	Action points for Municipalities / Commune Panchayats	District	Gap identification	Action Plan	Responsible Agencies	Timeline for completion of action plan
4.	Awareness and education programs implementation	Puducherry	Awareness programs among public for minimizing and recycling PW is being carried out regularly by involving sanitary workers, NGOs, schools, mass media campaigns. This needs to be transformed into a well-structured IEC program.	Well-structured IEC activities to be developed and implemented by engaging reputed firms for conducting three stage IEC activities in one year for ensuring responsible / accountable waste segregation by all waste generators.	Commissioners of all Municipalities and Commune Panchayats	Dec 2023
		Karaikal	Awareness and education programs are being conducted on proper disposal of plastic wastes and avoiding usage of single use plastics.	Regular awareness programs through mass media, schools, local announcements and other channels shall be carried out	Commissioners of Karaikal Municipality and all Commune Panchayats.	Continuous activity
5.	Access to Plastic Waste Disposal Facilities	Puducherry	<p>ULBs are having accesses to plastic waste disposal facilities. Recyclable plastic wastes are sent to local recycling industries. Also, tie-up has been made for co-processing of non-recyclable plastic wastes in cement kilns.</p> <p>Oulgaret Municipality are proposing to float tenders for establishing plastic waste recycling facility by third party at the MRF in Mettupalayam Truck Terminal.</p>	Establishment of Plastic Recycling facility at MRF in Truck Terminal, Infrastructure with 10 HP Shedder for supplying plastic waste for road construction to be taken up in the forth coming financial year. Budget: Rs. 10 Lakhs	Commissioner – Oulgaret Municipality	April 2022

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S. No.	Action points for Municipalities / Commune Panchayats	District	Gap identification	Action Plan	Responsible Agencies	Timeline for completion of action plan
		Karaikal	No gaps; Plastic waste recycling facilities available in the district. Additionally, Karaikal Municipality has tie-up for coprocessing 20 TPM of plastic waste in cement kiln.	-	-	-

(iii) C & D Waste Management

a. Current status related to C & D Waste

Details of Data Requirement	District	Present Status
Total C & D waste generation in MT per day (As per data from Municipal Corporations / Municipalities)	Puducherry	38 MT
	Karaikal	0.75 MT
Does the District have access to C&D waste recycling facility?	Puducherry & Karaikal	Not required as the wastes are used for land filling

b. Identification of gaps and Action plan:

S. No.	Action points for Municipalities / Commune Panchayats	District	Gap identification	Action Plan	Responsible Agencies	Timeline for completion of action plan
1.	Arrangement for separate collection of C&D waste to C&D waste deposition point.	Puducherry & Karaikal	Yes, separate C&D Waste Collection and deposition center established at Truck Terminal, Mettupalaym for ULBs. In commune panchayats C&D waste generated is disposed by the generators directly for filling of low-lying areas and hence there is no issue of C&D waste disposal.	-	-	-

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S. No.	Action points for Municipalities / Commune Panchayats	District	Gap identification	Action Plan	Responsible Agencies	Timeline for completion of action plan
2.	Whether local authority have fixed user fee on C&D waste and introduced permission system for bulk waste generators who generate more than 20 tons or more in one day or 300 tons per project in a month?	Puducherry	Bye law has been prepared and sent to Govt. for approval by Oulgaret Municipality. Others need to do the same.	Notification of By-law on user-fee and permission system for bulk waste generators for C&D waste	Commissioners of all Municipalities and Commune Panchayats	June 2022
		Karaikal	User fee and permission system for bulk waste generators not notified.	Notification to be issued to the public wherein they can deposit the C&D waste on user fee payment basis.	Dy. Director – Local Administration and Commissioners of Karaikal Municipality and all Commune Panchayats.	June 2022
3.	C&D recycling Facility	Puducherry	At present there is no C&D recycling facility as the generated quantity is very low and it is mostly sold by the generators for land filling or used for filling low lying areas. RFP for setting up of 100 TPD C&D processing facility has been tendered out by Oulgaret Municipality but, there was no response. Hence retendering work with suitable amendment is under progress.	Floating of RFP and Establishment of C&D Processing facility at Truck Terminal, Mettupalayam.	Commissioner – Oulgaret Municipality	June 2023

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S. No.	Action points for Municipalities / Commune Panchayats	District	Gap identification	Action Plan	Responsible Agencies	Timeline for completion of action plan
		Karaikal	No gaps; Not required as the generated quantity is very low and it is mostly sold by the generators for land filling or used for filling low lying areas.	-	-	-
4.	Usage of recycled C&D waste in non- structural concrete, paving blocks, 1 owner layers of road pavements, colony and rural roads	Puducherry	At present C&D waste is sold by the generators for land filling or used for filling in low lying areas. Bye law on use / promotion of C&D waste usage by various agencies has been prepared by Oulgaret Municipality and sent to Govt. for approval.	Notification of by-laws for use / promotion of C&D waste usage by various agencies	Commissioner – Oulgaret Municipality	March 2022
		Karaikal	No gaps; Not required as the generated quantity is very low and it is mostly sold by the generators for land filling or used for filling low lying areas.	-	-	-
5.	ICE on C & D waste management	Puducherry	No sustained IEC activities on C&D waste	Well-structured IEC activities to be developed and implemented by engaging reputed firms for conducting three stage IEC activities in one year for ensuring responsible /	Commissioners of all Municipalities and Commune Panchayats	Dec 2023

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S. No.	Action points for Municipalities / Commune Panchayats	District	Gap identification	Action Plan	Responsible Agencies	Timeline for completion of action plan
				accountable waste segregation by all waste generators.		
		Karaikal	No sustained IEC activities on C&D waste	Awareness programs on disposing C&D waste to deposition points shall be integrated with all SWM IEC activities	Karaikal Municipality and all Commune Panchayats.	Continuous activity

(iv) Biomedical Waste Management

a. Current Status related to biomedical waste

Inventory of BMW in the District	Puducherry District	Karaikal District
Total no. of Bedded Healthcare Facilities	52	24
Total no. of non-bedded HCF	174	35
No. of HCFs authorized by SPCBs/PCCs	226	40
No of Common Biomedical Waste Treatment and Disposal Facilities (CBWTFs)	1 No.	1 No. (Facility existing in Puducherry is Collecting and disposing BMW of Karaikal region)
Capacity of CBWTFs	10,000 Kg/day	10,000 Kg/day
No. of Deep burials for BMW if any	Nil	Nil
Quantity of biomedical waste generated per day	5427 Kg/day	782 Kg/day
Quantity of biomedical waste treated per day	5427 Kg/day	782 Kg/day

b. Identification of gaps and Action plan:

S. No.	Action points	District	Gaps	Action Plan	Responsible agency	Timeline for completion of action plan
1.	Inventory and Identification of Healthcare Facilities	Puducherry	Inventory of all HCFs including clinics, hospitals, veterinary hospitals, Aayush hospitals, animal houses, etc., generating biomedical waste has been carried out and all HCFs have been issued BMW Authorization.	-	-	-
		Karaikal	Inventory of all HCFs including clinics, hospitals, veterinary hospitals, Aayush hospitals, animal houses, etc., generating biomedical waste has been carried out and directions	PPCC shall ensure that all HCFs are functioning with valid BMW Authorization	Member Secretary, PPCC	March - 2022

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S. No.	Action points	District	Gaps	Action Plan	Responsible agency	Timeline for completion of action plan
			issued to all HCFs for obtaining BMW Authorization by PPCC.			
2.	Adequacy of facilities to treat biomedical wastes	Puducherry & Karaikal	Biomedical Waste generated in the district is disposed to CBMWTF located at Puducherry and the capacity is adequate.	-	-	-
3.	Tracking of BMW	Puducherry	GPS Tracking system provided in vehicles to track movement of BMW. 42 HCFs have so far registered with CMWTF for bar coding of wastes. Bar code system is yet to be implemented by all HCFs.	Implementation of Bar code system in all HCFs and CBMWTF to be done	PPCC	June 2022
		Karaikal	GPS Tracking system provided in vehicles to track movement of BMW. Bar code system is yet to be implemented by all HCFs and CBMWTF.	Implementation of Bar code system in all HCFs and CBMWTF to be done	Member Secretary, PPCC	June 2022
4.	Awareness and education of healthcare staff	Puducherry & Karaikal	Periodical training programs are conducted	-	-	-
5.	Adequacy of funds	Puducherry & Karaikal	Adequate funds are allocated by Govt. to the HCFs for BMW management.	-	-	-

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S. No.	Action points	District	Gaps	Action Plan	Responsible agency	Timeline for completion of action plan
6.	Compliance to Rules by HCFs and CBWTFs	Puducherry	State Level Advisory Committee and District Level Monitoring Committee has been constituted for effective implementation of BMW Rules.	Periodical inspection to be carried out by Health Department and PPCC to ensure 100% compliance .and report to be submitted to DLMC.	Health Department / PPCC	Continuous Activity
		Karaikal	No gaps; State Level Advisory Committee and District Level Monitoring Committee has been constituted for effective implementation of BMW Rules.	Periodical inspection to be carried out by Health Department and PPCC to ensure 100% compliance .and report to be submitted to DLMC.	Medical Superintendent, Health Department / Member Secretary, PPCC	Continuous Activity
7.	District Level Monitoring Committee	Puducherry	District Level Monitoring Committee has been constituted under the chairmanship of District Collector and reports to be submitted to State Level Advisory Committee once in six months with copy to PPCC for necessary action.	District Level Monitoring Committee to convene monthly review meeting and submit reports to State Level Advisory Committee once in six months with copy to PPCC for necessary action.	Health Department	Continuous Activity
		Karaikal	District Level Monitoring Committee has been constituted under the chairmanship of District Collector and reports to be submitted to State Level Advisory Committee once in six months with copy to PPCC for necessary action.	District Level Monitoring Committee to submit reports to State Level Advisory Committee once in six months with copy to PPCC for necessary action.	Medical Superintendent, Health Department	Continuous Activity
8.	Wastewater treatment	Puducherry	All Health Care Facility generating liquid effluent are required to provide Effluent Treatment Plants. PPCC is ensuring this through regular	Health Department / PPCC to inspect HCFs periodically and ensure establishment and operation of ETPs.	Health Department / PPCC	Continuous activity

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S. No.	Action points	District	Gaps	Action Plan	Responsible agency	Timeline for completion of action plan
			inspections.			
		Karaikal	All Health Care Facility generating liquid effluent are required to provide Effluent Treatment Plants. PPCC is ensuring this through regular inspections.	Health Department / PPCC to inspect HCFs periodically and ensure establishment and operation of ETPs.	Medical Superintendent, Health Department / Member Secretary, PPCC	Continuous activity

(v) Hazardous Waste Management

a. Current Status related to Hazardous Waste Management

Details of Data Requirement	Puducherry District	Karaikal District
No of Industries generating HW	120 Nos.	10 Nos.
Quantity of HW in the district	88441 MT/Annum	359 MT/Annum
(i) Quantity of Incinerable HW	1124 MT/Annum	2 MT/Annum
(ii) Quantity of land-fillable HW	5112 MT/Annum	0 MT/Annum
(iii) Quantity of Recyclable / utilizable HW	82205 MT/Annum	2648 MT/Annum
No of captive/common TSDF	No. of integrated TSDF - 0, No. of SLF - 0. No. of Standalone incinerators – 0 Hazardous waste is sent to TSDF in other states for disposal.	Nos of integrated TSDF - 0, Nos of SLF - 0. No of Standalone incinerators – 0 Hazardous waste is sent to TSDF in other states
Contaminated Sites or probable contaminated sites	Nil	0 Nos.

b. Identification of gaps and action plan:

S. No.	Action points	District	Gaps	Action Plan	Responsible agency	Timeline for completion of action plan
1	Regulation of industries and facilities generating Hazardous Waste	Puducherry	At present, there are 120 Hazardous waste generating industries in Puducherry District and all the industries are issued with HW Authorization and monitored regularly.	PPCC should ensure that all hazardous waste industries are authorized and a system of safe disposal is in place.	PPCC	Continuous activity
		Karaikal	At present, there are 10	PPCC should ensure that all	Member Secretary, PPCC	Dec 2022

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S. No.	Action points	District	Gaps	Action Plan	Responsible agency	Timeline for completion of action plan
			Hazardous waste generating industries in Karaikal District and all are authorized by PPCC.	hazardous waste industries are authorized and a system of safe disposal is in place.		
2	Establishment of collection centers	Puducherry	Three domestic hazardous wastes deposition centers have been established by ULBs - one each in the RRP at Puducherry, Mahe and Yanam region. The collected waste is sent to authorized agencies for disposal.	ULBs shall establish a minimum of one domestic hazardous deposition center per 20 sq.km. or per ward, for ease of deposition of the users.	Commissioners of all Municipality	Dec 2022
			One deposition center has been established by Ariyankuppam Commune Panchayat. Other Communes are yet to establish HW Deposition centers.	Commune Panchayats shall establish their own domestic hazardous deposition center or tie-up with the facilities available in nearby ULBs.	Commissioners of all commune panchayats	Dec 2022
				All Municipalities and Commune panchayats shall obtain linkage with TSDF and apply for HW authorization to PPCC	Commissioners of all Municipalities and Commune Panchayats.	Feb 2022
		Karaikal	One Deposition Centre available at Karaikal. Linkage with TSDF is under progress. Collection centers are not available in commune panchayats.	(i) Karaikal Municipality shall establish linkage with TSDF for scientific disposal of domestic hazardous Wastes. Records on collection and disposal of domestic hazardous Wastes shall be maintained and shall be submitted to PPCC regularly.	Commissioner, Karaikal Municipality	Feb 2022
				(ii) All Commune Panchayats shall establish linkage with	Commissioners of all Commune Panchayats.	Feb 2022

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S. No.	Action points	District	Gaps	Action Plan	Responsible agency	Timeline for completion of action plan
				the Deposition Centre at Karaikal or their own Deposition Centre for Hazardous Waste. Records on collection and disposal of domestic hazardous Wastes shall be maintained and shall be submitted to PPCC regularly.		
3	Training of workers involved in handling / recycling / disposal of HW	Puducherry	At present, four industries are engaged in recycling of hazardous waste in the district.	Industries to be regularly inspected and ensured that workers engaged in recycling / pre-processing / disposal of hazardous waste are given proper safety training and report to be submitted to DLMC.	Labour Department	Feb 2022
		Karaikal	No gaps; There is no such industry engaged in recycling / pre- processing / disposal of hazardous waste in the district.	-	-	-
4	Availability / Linkage with common TSDF or disposal facility	Puducherry & Karaikal	The hazardous wastes generated by the industries are currently disposed to authorized TSDF in the neighboring states.	-	-	-
5	Contaminated sites	Puducherry & Karaikal	There are no contaminated sites due to dumping of HW wastes in the district.	-	-	-

(vi) E-Waste Management

a. Current Status related to E-Waste Management

Details of Data Requirement	Puducherry District	Karaikal District
Inventory of E-Waste in MT/year	64.77 MT	Yet to be prepared
Collection centers established by ULBs in the District	0 Nos.	0 Nos.
Collection centers established by Producers or their PROs	2 Nos.	0 Nos.
No authorized E-Waste recyclers /Dismantler	0 Nos.	0 Nos.

b. Identification of gaps and action plan:

S. No.	Action points	District	Gaps in implementation	Action Plan	Responsible agency	Timeline for completion of action plan
1	Inventory / Generation of E-Waste / Bulk-waste generators	Puducherry	PPCC has to complete inventory of E-waste / Bulk waste generators and submit copy to District Administration.	Completion of Inventory	PPCC	Dec 2022

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S. No.	Action points	District	Gaps in implementation	Action Plan	Responsible agency	Timeline for completion of action plan
		Karaikal	PPCC has to complete inventory of E-waste / Bulk waste generators and submit copy to District Administration.	Completion of Inventory	Member Secretary, PPCC	Dec 2022
2	E-Waste collection points	Puducherry	At present, 2 Nos. of E-waste collection points have been established by PROs in Puducherry and Oulgaret Municipality. Further, 2 more private collection centers are operating with authorization of PPCC. Collection points are not available in other ULBs and local bodies.	Local bodies to identify / establish E-Waste collection points in association with Producers - their PROs or Recyclers.	Commissioners of all Municipalities and Commune Panchayats and Director – LAD.	Dec 2022
		Karaikal	At present, E-waste is collected along with dry waste and segregated at the MRF of Karaikal Municipality. No separate collection points are established in Karaikal District.	Local bodies to identify / establish E-Waste collection points in association with Producers - their PROs or Recyclers in Karaikal District.	Commissioners of Karaikal Municipality and all commune panchayats	Dec 2022
3	Linkage among Stakeholders to channelize E-Waste	Puducherry	ULB's have not made any Linkage with e-waste dismantlers or Recyclers for channelization of e-waste collected in the district.	Local bodies are required to hand over the e-waste collected in their jurisdiction to authorized e-waste collection centers in Puducherry or recycler/ dismantlers in neighboring states by executing an MOU with the recycler/ dismantlers.	Commissioners of all Municipalities and Commune Panchayats and Director – LAD.	Dec 2022

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S. No.	Action points	District	Gaps in implementation	Action Plan	Responsible agency	Timeline for completion of action plan
		Karaikal	At present no E-waste collection centers has been established in the district with linkage to recyclers. E-waste collection centers in Puducherry district is providing necessary support.	(i) Local bodies are required to hand over the e-waste collected in their jurisdiction to the PPCC authorized e-waste recycler or dismantlers by executing an MOU with the recycler/ dismantlers in the nearby District. Local bodies to identify / establish E-Waste collection centers in association with Producers - their PROs or Recyclers in Karaikal District.	Karaikal Municipality and all commune panchayats	Dec 2022
4	Regulation of Illegal E-Waste recycling / dismantling	Puducherry & Karaikal	At present, there is no illegal E-waste recycling / dismantling in the district and PPCC is regularly monitoring this.	-	-	-
5	Integration of informal sector	Puducherry	There are no any such mechanism existing for bringing informal sector into main stream in collection and recycling of E-Waste.	Inventorisation of informal sectors if any engaged in collection and recycling activity of E-waste in the district.	PPCC	June 2022
		Karaikal	There are no any such mechanism existing for bringing informal sector into main stream in collection and recycling of E-Waste.	Inventorisation of informal sectors if any engaged in collection and recycling activity of E-waste in the district.	Member Secretary, PPCC	June 2022

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S. No.	Action points	District	Gaps in implementation	Action Plan	Responsible agency	Timeline for completion of action plan
6	Awareness and Education	Puducherry	Awareness and Education on E-waste is carried out by Karo Sambhav Private Limited which is a PRO for leading brands authorized by CPCB. Such awareness programs need to be conducted on regular basis.	Plan special workshops and awareness campaigns through Producers / PROs / NGOs	Commissioners of all Municipality and Commune panchayats and PPCC	Continuous activity
		Karaikal	Awareness and Education on E-waste is carried out by Karo Sambhav Private Limited which is a PRO for leading brands authorized by CPCB. Such awareness programs need to be conducted on regular basis.	Plan special workshops and awareness campaigns through Producers / PROs / NGOs	Commissioners of Karaikal Municipality and all Commune panchayats and Member Secretary, PPCC	Continuous activity

3.0 Air Quality Management

a. Current Status related to Air Quality Management

Details of Data Requirement	Puducherry District	Karaikal District
Number of Automatic Air Quality monitoring stations in the district. Operated by SPCB / State Govt / Centralgovt./ PSU agency : Operated by Industry:	Operated by PPCC – One Operated by Industry – Nil	Operated by PPCC – Nil (Proposed to install on CAAQM in Karaikal; Location identified and proposal under progress) Operated by Industry – 3 Nos. (at Karaikal Port)
Number of manual monitoring stations operated by SPCBs	3 Nos.	3 Nos.
Name of towns / cities which are failing to comply with national ambient air quality stations	Nil	Nil
No of air pollution industries	320 Nos.	40 Nos.
Prominent air polluting sources [Large Industry] / [Small Industry] / [Unpaved Roads] / [Burning of Waste Stubble] / [Brick Kiln] / [Industrial Estate] / [Others] (Multiple selection)	Major sources of air emission are vehicular emission. Other sources are MS Ingots , Ferro Alloys and Chemical industries and waste burning.	Major sources of air emission is vehicular emission. Other sources are M/S. Ingot , Ferro Alloys, Calcium carbides and Chemical industries, Coal handling in Karaikal Port and waste burning.

b. Identification of gaps and action plan:

S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Identification of prominent air polluting sources?	Puducherry	No gaps; There is no air pollution hotspot in the district. PPCC has the inventory of air polluting industries and ensures their compliance to prescribe	PPCC	Completed

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S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
			standards.		
		Karaikal	No gaps; There is no air pollution hotspot in the district. PPCC has the inventory of air polluting industries and ensures their compliance to prescribe standards.	-	-
2	Ambient Air quality data	Puducherry	One CAAQM and 3 Manual Ambient Air Quality Monitoring stations are operated by PPCC in the district. The Ambient air quality is well within the National Ambient Air Quality Standard limits. Air Quality data is disseminated in the website of PPCC and Sameer App developed by CPCB for public information. Action: Ambient Air Quality Data shall be displayed in the website of District Administration as per order passed by Hon'ble NGT dated 01.12.2020 in OA No. 249/2020.	Dy. Collector (HQ), District Administration	Completed
		Karaikal	No gaps; Manual Ambient Air Quality Monitoring stations are operated by PPCC at 3 locations in the district and data is disseminated in the website of District Administration and PPCC.	-	-
3	Setting up of Continuous Ambient Air Quality Monitoring Station	Puducherry	PPCC has established one CAAQM station with real time digital display (board) at the district headquarters, Puducherry. The data can be easily accessed in the website of PPCC and Sameer App developed by CPCB.	PPCC	Completed
		Karaikal	At present there is no Continuous Ambient Air Quality Monitoring Station in the district. 3 CAAQM stations have been established by Karaikal	Member Secretary, PPCC	Dec 2022

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S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
			<p>port within their premises and the data is available for public viewing on real time basis in the PPCC website.</p> <p>PPCC to be establish one CAAQM station in Karaikal with real time digital display (board) of standards of air quality parameters for the public and the same will be added to the official website of the district administration and PPCC.</p>		
4	District Level Action Plan for Air Pollution	Puducherry	<p>Air quality is within the prescribed NAAQM Standards in the district.</p> <p>PPCC shall prepare District Level Action Plan for improvement of existing air quality and control of air pollution from prominent sources in order to ensure that NAAQM Standards are met continuously.</p>	PPCC	Dec 2022
		Karaikal	<p>Air quality is within the prescribed NAAQM Standards.</p> <p>PPCC shall prepare District Level Action Plan for improvement of existing air quality and to ensure that NAAQM Standards are met continuously. meeting the emission norms at all times.</p>	Member Secretary, PPCC	June 2022
5	Hot Spots for air pollution in district	Puducherry & Karaikal	No air pollution hot spots are located in the district and the air quality is meeting the NAAQM Standards.	-	-
6	Awareness on Air Quality	Puducherry	AAQ data are available to public in the website of PPCC and Sameer App developed by CPCB.	PPCC	Completed
		Karaikal	AAQ data from the manual monitoring stations are available to public in the website of District Administration and PPCC.	-	-

4.0 Water Quality Management

4.1 Water Quality Monitoring

a. Current Status related to Water Quality Management

Details of Data Requirement	Puducherry District	Karaikal District
Rivers	Gingee /Sankarabarani – 34 km Ponnaiyar – 6 km Guduvaiuyar – 19.3 km Pambaiyar – 13 km Malatar – 10 km Mahe – 1.9 km Gouthami Godavari – 16 km Coringa – 3.5 km	Nandalar – 15.17 Km Nattar – 12.60 Km Vanjiyar – 12.30 Km Noolar – 16.62 Km Arasalar – 11.76 Km Mullaiyar – 6.60 Km Thirumalairajanar – 10.22 Km Pravadayanar – 3.35 Km
Length of Coastline (if any)	23.62 Km	17.3 Km
Nalas/ Drains/Creeks meeting Rivers	56 Nos.	56 Nos.
Lakes / Ponds	Lakes: 84, Area: 2437.5 Ha Ponds: 477, Area: 254.76 Ha	Lakes – 6 Nos. - 75 ha .99 a Ponds - 549 Nos. - 97 ha.90a.03ca
Total Quantity of sewage from towns and cities in District	58.75 MLD	10 MLD
Quantity of industrial wastewater	4.75 MLD	0.4 MLD
Percentage of untreated sewage	About 1 MLD untreated sewage is estimated to be discharged into Sankarabarani River; DPR under preparation for installing 3 MLD sewage treatment plant. Untreated sewage entering into other rivers are not quantified. About 58.75 MLD of sewage is generated in the Puducherry and Oulgaret towns. STP with total treatment capacity of 68.5 MLD are provided in three locations. The present quantity of sewage treated is about 47 MLD	20.7 % of untreated sewage is entering into the drains

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	only since 100% connectivity to sewer system is yet to be achieved. Houses which are not connected to sewerage network are provided with septic tank and soak pit. Hence untreated sewage is not quantified. STPs are not available in Mahe and Yanam Municipality and the commune panchayats in rural area. However, septic tanks and soak pits are provided by the households in these areas.	
Details of bore wells and number of permissions given for extraction of groundwater	Agriculture - 650 Drinking - 700 Industry - 350	Agriculture - 387 Drinking - 112 Industry - 42
Groundwater polluted areas if any	Nil	Nil
Polluted river stretches if any	Yes, as per the NGT Order O.A. No. 673/2018, The tail end portion of Sankarabarani river known as Chunnambar is classified as polluted river stretch (Priority V – BOD exceeding 3 mg/L but, less than 6 mg/L).	Arasalar – 11.76 Km

b. Identification of gaps and action plan for water quality monitoring:

S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Identification of prominent air polluting sources?	Puducherry	No gaps; There is no air pollution hotspot in the district. PPCC has the inventory of air polluting industries and ensures their compliance to prescribe standards.	PPCC	Completed
		Karaikal	No gaps; There is no air pollution hotspot in the district. PPCC has the inventory of air polluting industries and ensures their compliance to prescribe standards.	-	-
2	Ambient Air quality data	Puducherry	One CAAQM and 3 Manual Ambient Air Quality Monitoring stations are operated by PPCC in the district.	Dy. Collector (HQ), District Administration	Completed

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S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
			<p>The Ambient air quality is well within the National Ambient Air Quality Standard limits.</p> <p>Air Quality data is disseminated in the website of PPCC and Sameer App developed by CPCB for public information.</p> <p>Action: Ambient Air Quality Data shall be displayed in the website of District Administration as per order passed by Hon'ble NGT dated 01.12.2020 in OA No. 249/2020.</p>		
		Karaikal	<p>No gaps; Manual Ambient Air Quality Monitoring stations are operated by PPCC at 3 locations in the district and data is disseminated in the website of District Administration and PPCC.</p>	-	-
3	Setting up of Continuous Ambient Air Quality Monitoring Station	Puducherry	<p>PPCC has established one CAAQM station with real time digital display (board) at the district headquarters, Puducherry.</p> <p>The data can be easily accessed in the website of PPCC and Sameer App developed by CPCB.</p>	PPCC	Completed
		Karaikal	<p>At present there is no Continuous Ambient Air Quality Monitoring Station in the district.</p> <p>3 CAAQM stations have been established by Karaikal port within their premises and the data is available for public viewing on real time basis in the PPCC website.</p> <p>PPCC to be establish one CAAQM station in Karaikal with real time digital display (board) of standards of air quality parameters for the public and the same will be added to the official website of the district</p>	Member Secretary, PPCC	Dec 2022

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S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
			administration and PPCC.		
4	District Level Action Plan for Air Pollution	Puducherry	Air quality is within the prescribed NAAQM Standards in the district. PPCC shall prepare District Level Action Plan for improvement of existing air quality and control of air pollution from prominent sources in order to ensure that NAAQM Standards are met continuously.	PPCC	Dec 2022
		Karaikal	Air quality is within the prescribed NAAQM Standards. PPCC shall prepare District Level Action Plan for improvement of existing air quality and to ensure that NAAQM Standards are met continuously, meeting the emission norms at all times.	Member Secretary, PPCC	June 2022
5	Hot Spots for air pollution in district	Puducherry & Karaikal	No air pollution hot spots are located in the district and the air quality is meeting the NAAQM Standards.	-	-
6	Awareness on Air Quality	Puducherry	AAQ data are available to public in the website of PPCC and Sameer App developed by CPCB.	PPCC	Completed
		Karaikal	AAQ data from the manual monitoring stations are available to public in the website of District Administration and PPCC.	-	-

4.2 Domestic Sewage Management

a. Identification of gaps and action plan for treatment of domestic sewage

Details of Data Requirement	Puducherry District	Karaikal District
No of Class-II towns and above	2	1 No.
No of Class-I towns and above	Nil	Nil
No of Towns STPs installed	2	Nil
No of Towns needing STPs	Nil	1 No.
No of ULBs having partial underground sewerage network	2	Nil
No of towns not having sewerage network	Nil	1 No.
Total Quantity of Sewage generated in District from Class II cities and above	58.75 MLD	10 MLD
Quantity of treated sewage flowing into Rivers (directly or indirectly)	Nil	Nil
Quantity of untreated or partially treated sewage (directly or indirectly)	1 MLD (In Sankarabarani River); 3 MLD STP is proposed for this.	2.07 MLD (in Arasalar river); 3 MLD STP is proposed for this.
Quantity of sewage flowing into lakes	Nil	Nil
Total available Treatment Capacity	68.5MLD	Nil

b. Identification of gaps and action plan for treatment of domestic sewage:

No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Sewage Treatment Plants (STPs)	Puducherry	Three are two Class II towns in the district viz. Puducherry and Oulgaret. 58.75 MLD of sewage is estimated to be generated in the 2 towns. Both the towns are provided with underground sewerage network connected to terminal STP, with total treatment capacity of 68.5 MLD are provided at	-	-

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No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
			three locations. The present quantity of sewage treated is about 47 MLD only since 100% connectivity to sewer system is yet to be achieved. Houses which are not connected to sewerage network are provided with septic tank and soak pit. Hence untreated sewage is not quantified. The available capacity of STP is adequate at present.		
		Karaikal	At present there is no underground sewage collection system or sewage treatment plant in the Karaikal town and the sewage generated is mostly treated in-situ through septic tanks and soak pits. Around 2.07 MLD of untreated sewage is estimated to be discharged into the drainage channels causing pollution of waterbodies. PWD is preparing DPR for installation of 3 TPD capacity sewage treatment plant for the drainage channels in the first phase. PWD also proposes to establish underground sewage pipeline network connected to terminal sewage treatment plant of 10 MLD capacity in the town in the second phase. Following action plan to be complied:		
		(i)	DPR shall be prepared for 3 MLD STP for the drainage channels.	Executive Engineer, PWD – I&PH	March 2022
		(ii)	Installation and commissioning of 3 MLD STP for the drainage channels	Executive Engineer, PWD – I&PH	March 2023
2	Underground sewerage network	Puducherry	Underground sewerage network has been completed in Puducherry & Oulgaret Towns. House service connection has been provided to 83% house hold. Action: 100% house hold connection to underground sewerage network to be achieved.	EE - PWD (PH Division)	Dec 2022

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No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
		Karaikal	DPR shall be prepared for establishing underground sewerage network connected to terminal Sewage Treatment Plant for entire Karaikal town and implemented in time bound manner.	Executive Engineer, PWD – I&PH	Dec 2025

5.0 Industrial wastewater management

a. Current Status related to Industrial Wastewater Management

Details of Data Requirement	Puducherry District	Karaikal District
Number of Red, Orange, Green and White industries in the District	Red – 174; Orange – 1680; Green – 2778; White – 71	Red – 8 Nos. Orange – 84 Nos. Green – 104 Nos. White – 12 Nos.
No of Industries discharging wastewater	94 Nos.	8 Nos.
Total Quantity of industrial wastewater generated	4.75 MLD	0.4 MLD
Quantity of treated industrial wastewater discharged into Nalas / Rivers	Nil	Nil
Common Effluent Treatment Facilities	Nil	Nil
No of Industries meeting Standards	94 Nos.	8 Nos.
No of Industries not meeting discharge Standards	Nil	Nil

b. Identification of gaps and action plan for industrial wastewater:

S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Compliance to discharge norms by Industries	Puducherry	At present all the industries are meeting the industrial wastewater discharge norms. PPCC is regularly inspecting and monitoring the industrial effluent discharge and ensures that the discharge norms are met. This is to be continued.	PPCC	Continuous activity
		Karaikal	At present all the industries are meeting the industrial wastewater discharge norms. PPCC is regularly inspecting and monitoring the industrial effluent discharge and ensures that the discharge norms are met. This is to be continued.	Member Secretary, PPCC	Continuous activity
2	Complaint redressal system	Puducherry & Karaikal	Mobile App and online complaint redressal system has been developed by PPCC for pollution related complaints.	-	-

6.0 Mining Activity Management plan

a. Current Status related to Mining Activity Management

Details of Data Requirement	Existing Mining operations of Puducherry & Karaikal
Type of Mining Activity	Sand Mining
No of licensed Mining operations in the district	Nil
% Area covered under mining in the district	Nil
Area of Sand Mining	Nil
Area of sand Mining	Nil

b. Identification of gaps and action plan:

S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Monitoring of Mining activity	Puducherry & Karaikal	There is no sand mining quarry or other mining leases issued in the district.	-	-
2	Inventory of illegal mining if any mining	Puducherry	Special Task Team has been constituted under the chairmanship Dy. Collector for curtailing illegal sand mining and its transportation. Records are maintained by DRDM.	Dy. Collector Revenue (South), DRDM	Continuous activity
		Karaikal	Special Task Team has been constituted under the chairmanship District Collector for curtailing illegal sand mining and its transportation. Records are maintained by DRDM.	Dy. Collector, DRDM	Continuous activity
3	Environment compliance by Mining industry	Puducherry & Karaikal	There is no sand mining quarry or other mining leases issued in the district.	-	-

7.0 Noise Pollution Management plan

a. Current Status related to Noise Pollution Management

Details of Data Requirement	Measurable Outcome of Puducherry	Measurable Outcome of Karaikal
No. of noise measuring devices available with various agencies in district	Traffic Police – 4 No. PPCC – 1 No.	Traffic Police – 1 No. PPCC – 1 No.

b. Identification of gaps and action plan:

S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Availability of Sound/Noise Level Meters.	Puducherry & Karaikal	4 number of Noise Level Meters are available with Police Department and 2 Nos. are with PPCC which is sufficient.	-	-
2	Ambient Noise Level monitoring.	Puducherry	Fixed Ambient Noise Level Monitoring Stations are not available in Puducherry District. This is may not be required for Puducherry as there is no alarming noise pollution. Action: PPCC and police department to conduct noise monitoring in noise potential areas and take action against defaulters. Report to be submitted to District Level Environment Monitoring Cell once in three months.	MS-PPCC and SP – Traffic Police	Continuous activity
		Karaikal	Ambient Noise Level monitoring is carried out regularly at 4 locations in Karaikal town. There is no alarming noise pollution. PPCC and police department to conduct noise monitoring in noise potential areas and take action against defaulters. Report to be submitted to District Level Environment Monitoring Cell once in three months.	Member Secretary - PPCC and Superintendent of Police.	Continuous activity

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S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
3	Signboards in Noise zones	Puducherry	Silent Zones to be delineated and notified in the district	CTP, T&PCD	June 2022
			Adequate number of sign board to be installed in the roads along silent zones.	EE, PWD – B&R division	Dec 2022
		Karaikal	Adequate number of sign board to be installed in the roads along silent zones.	Executive Engineer, PWD – B&R division	Dec 2022
4	Complaint redressing system	Puducherry & Karaikal	Mobile App and online complaint redressal system has been developed by PPCC for pollution related complaints.	-	-

8.0 Coastal Zone Management

a. Current status related to coastal zone

Coastal areas are under pressure due to industrial growth and population explosion. Rapid development along the coast has resulted in increased migration to coastal cities and the expansion of coastal settlements. Hon'ble National Green Tribunal (NGT) in O.A.NO.829 of 2019, directed all the coastal States to include components of coastal pollution issues in the District Environment Plan. The coastal stretch faces the threat of coastal pollution due to the rapidly increasing urbanisation and tourism activities. Waste water discharged from domestic and commercial activities to the nearby drainage canals finally enters in to the sea through the creeks and channels.

PWD has implemented comprehensive underground sewerage network for the entire urban area in Puducherry District. But still large amount of untreated sewage enters into the sea as 100% underground sewerage network connectivity has not been achieved among households. In Karaikal District, PWD has prepared a proposal to bring entire urban households in underground sewer connectivity with appropriate sewage treatment system.

PPCC ensures that industries located nearer to the coast are not discharging any untreated waste water. The coastal water quality of the region is monitored by Puducherry Pollution Control Committee under the sea water quality monitoring program supported by NCCR, Chennai.

Coastal erosion due to natural and anthropogenic causes is another important issue threatening the security and livelihood of coastal population. As per the 2011 report of National Centre for Sustainable Coastal Management, titled "National Assessment of Shoreline Change: Puducherry Coast",

- Puducherry Coast is approximately 23.62 km long including river mouths and port, of which 7.6 km is eroding. About 6.18 km (26.2%) of coast is protected by sea walls. The shoreline to the north of breakwaters of Puducherry Port is highly vulnerable to coastal erosion.
- Karaikal Coast is approximately 17.3 km long including river mouths and port, of which

nearly 3.98 km (23%) of the coast is stable, where no shoreline change is observed. Approximately 8 km (46%) of this coastal stretch is accreting. Low erosion zone occurs in the northern part of Karaikal coastline for about 2.0 km (~11.5% of the total coastline). Medium erosion is observed for about 290 meters on the northern side of the Karaikal Port.

Government of Puducherry prepared the Shore Line Management Plan for the coast of Puducherry in association with NIOT, Chennai. Based on the shoreline management plan Puducherry Beach Restoration Project was implemented by the Government through NIOT, Chennai involving a Hybrid Solution of Nearshore Wedge Reef, Offshore Submerged Reef and Sand Nourishment. The project which was commenced in March 2017 with financial support of Ministry of Earth Sciences had resulted in restoration of the beach in front of Puducherry town.

PWD and Port Department have to closely monitor the shoreline changes in the eroding zone and take necessary action for implementing shoreline protection measures.



Figure 8: Shoreline changes map of Puducherry region (Source: National Assessment for Shoreline Change: Puducherry Coast, NCSCM, 2011)

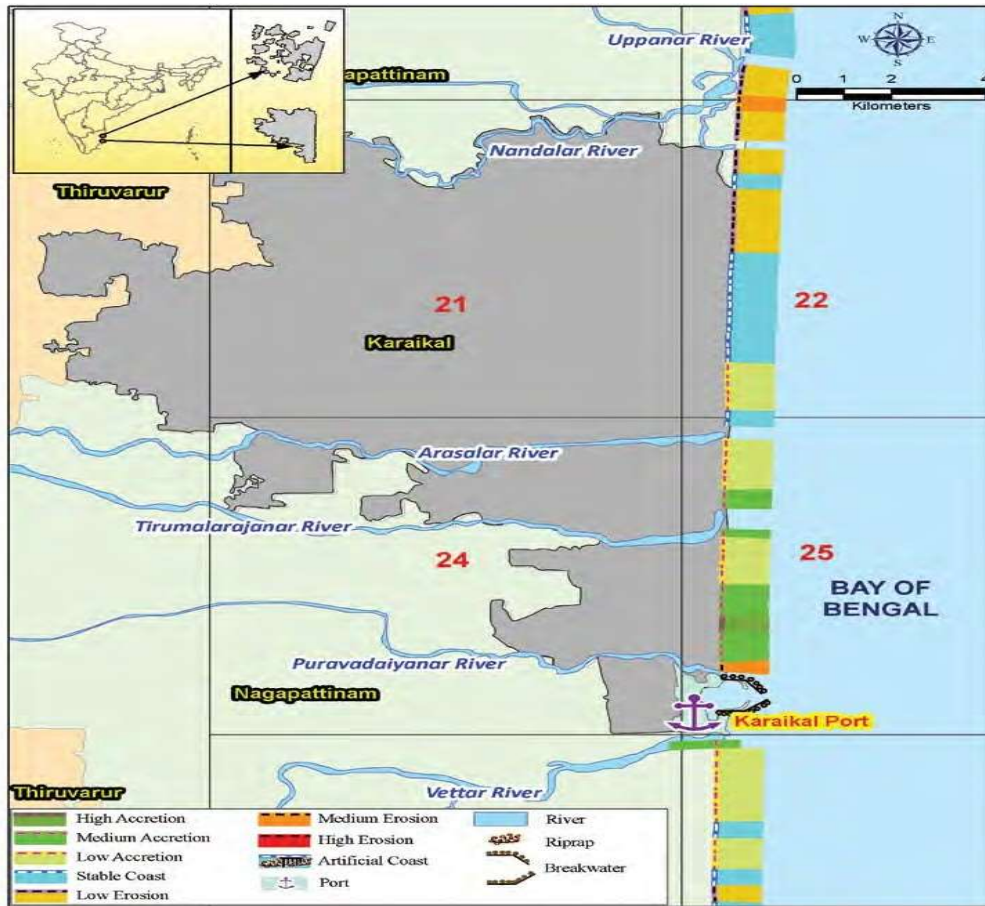


Figure 9: Shoreline changes map of Karaikal region (Source: National Assessment for Shoreline Change: Puducherry Coast, NCSCM, 2011)

b. Identification of gaps and action plan:

S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Coastal pollution	Puducherry	Monitoring of coastal water quality regularly and submission of report to District Level Environment Monitoring Cell	Member Secretary - PPCC	Continuous activity
		Karaikal	Monitoring of coastal water quality regularly and submission of report to District Level Environment Monitoring Cell	PPCC	Continuous activity

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S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
2	Shoreline Protection	Puducherry	Monitoring the shoreline changes at regular intervals and submitting reports to the District Level Environmental Monitoring Cell; initiating appropriate measures for shoreline protection based on monitoring of shoreline changes.	Director - Port Department and Chief Engineer, PWD.	Continuous activity
		Karaikal	Monitoring the shoreline changes at regular intervals and submitting reports to the District Level Environmental Monitoring Cell; initiating appropriate measures for shoreline protection based on long-term monitoring of shoreline changes.	General Manager (Env. & Safety), Karaikal Port, Executive Engineer, PWD – I&PH	Continuous activity

9.0 Increasing Green Cover:

a. Current Status of Green cover

Region-wise Forest cover statistics for U.T. of Puducherry as per the 2019 report of Forest Survey of India is given in the below table.

District	Geographical Area (GA)	2019 Assessment				% Of GA	Change wrt 2017 assessment	Scrub
		Very Dense Forest	Mod. Dense Forest	Open Forest	Total			
Karaikal	157	0	6.83	8.34	15.17	9.66	-0.23	0.00
Mahe	9	0	1.06	4.61	5.67	63.00	0.00	0.00
Puducherry	294	0	9.77	15.35	25.12	8.55	-0.98	0.00
Yanam	30	0	0.00	6.45	6.45	21.50	-0.05	0.00
Grand Total	490	0	17.66	34.75	52.41	10.70	-1.26	0.00

In Puducherry district, the total forest cover is 63% of the geographical area in Mahe region, 21.5% in Yanam region and only 8.55% in Puducherry region. In Karaikal district the total forest cover is 9.66%. National Forest Policy of India recommends that 33% of the geographical area should be covered with forests. Hence, there is a need for protecting the existing forest cover and increasing the afforestation drive in Puducherry region.

In Puducherry district, Department of Forest and Wild Life has taken various measures to improve green cover. Currently, 26.1 sq.km. of green cover has been developed by the Forest Department. Most of the plantation has been carried out in Social Forestry Scheme. Two nurseries are functioning one at Lawspet and another at Mettupalayam. Around 1 lakh seedlings are produced annually in the two nurseries and distributed to the public at free of cost. During the current year Forest Department in coordination with other departments, Institution, Industries and NGOs has planted around 80,300 forest tree saplings in and around Puducherry. In addition, around 1.5 lakhs palm seeds have been planted in collaboration with Bharathi Green Foundation.

In Karaikal district, the Forest Department and Agriculture Department is taking maximum efforts to increase the area of green cover through social agroforestry programmes and tree plantation drives.

Under Social and Agro Forest scheme, 52.54 Ha. of land has been brought under plantation. DRDA is also carrying out tree plantation under MGNREGS in the vacant lands and pond bunds. During the year 2020-21, BDO, Karaikal and Rotary Club jointly planted 15000 nos. of Palm seeds from Mandapathur to Vanjore along seashore area for creating natural defense against cyclones and other coastal hazards.

A manmade mangrove forest has been developed and maintained by the Department of Tourism, Forest and Wildlife and Fisheries in the tri junction of River Arasalar, Bay of Bengal and Beach of Karaikal. Currently, the area of mangroves is 32.3 ha. and harbours seven species of true mangrove plants and 128 species of associated mangrove plants. Karaikal mangroves also act as an important stop over site for large numbers of long-distance migratory water bird species around the year. The district administration has initiated establishment of a Biodiversity Park in this Mangrove area.

b. Identification of gaps and action plan:

S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Inventory of land available for afforestation program	Puducherry	The government land suitable for afforestation drive shall be identified and published in the district website.	DRDM	March 2022
		Karaikal	The government land suitable for afforestation drive shall be identified and published in the district website.	Assistant Director of Survey and Settlement, Revenue Dept.	March 2022
2	Enhancing green cover	Puducherry	Conducting mass tree plantation drives in the identified vacant lands by involving local bodies and other government agencies, industries, institutions, NGOs and public.	Forest Department	Oct 2022
			Distribution of 10000 free saplings	Forest Department	March 2022
			Tree plantation along Tank and Pond Bunds	PWD and Local Bodies	Oct 2022

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S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
		Karaikal	Conducting mass tree plantation programmes in the identified sites with participation of industries, educational institutions, NGOs and public.	District Administration in association with Forest Department, Agriculture Department, DRDM, Education Department, PPCC and Local Bodies.	Continuous activity
			Establishment of Biodiversity Park in Mangrove Forest	DCF, Forest Department and Executive Engineer, PWD – I&PH	Dec 2022
			Establishment of Eco- Park at PAJANCO&RI, Karaikal	Dean, PAJANCO&RI	Dec 2023
			Free distribution of 5000 Tree saplings to farmers and general public to increase green cover	DCF, Forest Department	Dec 2022
			Plantation of 1200 tree saplings in Temple land	Executive Officer – Temples	Dec 2022
			Tree plantation along bunds of 75 Ponds proposed for desilting under Nam Neer Program.	Block Development Officer	Dec 2022
			Tree plantation along bunds of 147 ponds rejuvenated under NAFCC project	Commissioners of Municipality and Commune Panchayats	Dec 2022

10. Water Conservation & Rain Water Harvesting:

a. Current Status of Water Conservation & Rain Water Harvesting

In UT of Puducherry, the irrigation water channels and tanks are under the custody of Irrigation Division of the Public Works Department and the village ponds lies with the respective Municipalities and Commune Panchayats under the Local Administration Department. The Conservation, restoration and maintenance of the Tanks and Ponds is executed by these agencies. Besides the District Rural Development Authority also executes works related to desilting of ponds and channels under MGNREGA.

The Puducherry District Administration launched the “Neerum Oorum” project on 05.09.2019 to protect and restore the water bodies and augment the ground water resources of Puducherry on mission mode. All the Tanks and Ponds were geo-tagged and Unique Identification Number was provided. The District Administration in association with the NEERI, Nagpur, developed an Android-based mobile application called ‘Neer Padhivu - Jal Abhilekha’ to digitize all water bodies in Puducherry and crowdsourcing the information of waterbodies in Puducherry with geo-tagging and visualization of uploaded and approved information. Revival of waterbodies were carried out with involvement of corporations, hotels, resorts, schools, NGOs and locals. 198 Ponds and 206 km stretch of canal was revived under the program. Further, 39 irrigation tanks and 39 village ponds in Puducherry are being rejuvenated by PWD and Local bodies under the National Adaptation Fund for Climate Change (NAFCC).

Karaikal district is largely depending on surface water resources for its water needs. Monsoon failure and insufficient release of water from Mettur Dam causes tremendous stress on the water resource of the district. In 2019, consequent to the deficient and uneven distribution of rainfall and inadequate receipt of Cauvery River water, the district was drought affected and most of the ponds become dry. The ground water level went down from 200 to 300 feet. To overcome the drought the district administration took up rejuvenation of village ponds with top priority and launched the “Nam Neer” project in which 178 ponds and their channels were revived within 3 months. The momentum for rejuvenation of water bodies is kept alive and each year more and more water bodies are rejuvenated and revived. During the current year 147 ponds are being desilted and rejuvenated under the NAFCC scheme. Further, the district administration is also keen in artificial recharge of ground water

through cost-effective rain water harvesting systems. A concerted effort involving various Government agencies and NGOs can create the necessary awareness among the public for installing rain water harvesting systems.

Jal Sakthi Kendras has been established in the Puducherry and Karaikal districts by the Local Administration Department for implementing Catch the Rain scheme. The Kendra will serve as single nodal agency for all data related to water bodies and their conservation and rain water harvesting.

b. Identification of gaps and action plan:

S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Augmentation of surface waterbodies	Puducherry	Desilting of 39 irrigation tanks and 39 ponds under NAFCC scheme	Director – DSTE, EE-Irrigation, PWD and Commissioners of respective Commune Panchayats	March 2022
			Desilting of Ponds under MGNREGA	Project Director - DRDA	Continuous activity
		Karaikal	Desilting of 147 ponds under NAFCC scheme	Commissioners of Municipality and Commune Panchayats	March 2022
			Formation of one mini lake at Padutharkollai	Executive Engineer, PWD – I&PH	March 2022
			Desilting of 75 ponds under Nam Neer program	Block Development Officer	Dec 2022
2	Augmentation of ground water sources	Puducherry	Preparation of Action Plan for Rain Water Harvesting in Puducherry District	State Ground Water Unit	Dec 2022
			Preparation of DPR for Rain Water Harvesting in all government buildings with implementation timelines	PWD – B&R, Municipality and Commune Panchayats	Dec 2022

S. No.	Action points	District	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
			Enforcement of Rain Water Harvesting in all buildings and projects where ground water is abstracted and submission of report to the district administration.	Puducherry Ground Water Authority	June 2022
			IEC activities for popularizing rain water harvesting and conservation of waterbodies; at least 6 programs in a year.	Puducherry Ground Water Authority	Continuous activity
		Karaikal	Preparation of Action Plan for Rain Water Harvesting in Karaikal District	Hydrogeologist, State Ground Water Unit	Dec 2022
			Preparation of DPR for Rain Water Harvesting in all government buildings with implementation timelines	Executive Engineer, PWD – B&R and Commissioners of Municipality and Commune Panchayats	Dec 2022
			Enforcement of Rain Water Harvesting in all buildings and projects where ground water is abstracted and submission of report to the district administration.	Member Secretary, Puducherry Ground Water Authority	June 2022
			IEC activities for popularizing rain water harvesting and conservation of waterbodies; at least 6 programs in a year.	Member Secretary, Puducherry Ground Water Authority	Continuous activity