

**PUDUCHERRY
KARAIKAL DISTRICT**

Kilometres
 3 ————— 0 ————— 3

From Andhra Pradesh To Pondicherry

From Kumbakonam

From Perambalur

Nandavan

Vairavari

Malar

THIRUNALLUR

KARAIKAL

Anaimalai

Tamil Nadu

Arabian Sea

Thiruvananthapuram

From Nagapattinam

From Nagar

District Headquarters is also the Taluk Headquarters

● - Part of Tamil Nadu

Boundary, State / U.T./ District.....	—————
" Taluk.....	—————
Headquarters District.....	●
" Taluk.....	○
Villages having 5000 & above Population with name.....	●
Urban area with Population size II & IV.....	● ●
National Highway.....	Red line with numbers
Slate Highway.....	Brown line with numbers
Important Metalled Road.....	Thin brown line
Railway line with Station, Broad Gauge.....	Black dashed line with cross-ticks
River and Stream.....	Blue wavy line



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Office of the District Collector
Karaikal District
U.T. of Puducherry
E-Mail: collr.kkl@nic.in

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1.0 District Profile

The Union Territory of Puducherry, formed out of erstwhile French colonies of India consists of two districts, viz., Puducherry and Karaikal. The two districts are situated at different geographical locations isolated from one another. Puducherry District comprises Puducherry, Mahe and Yanam regions. Karaikal district comprises of the Karaikal region.

Karaikal region had strong influences of both Indian dynasties as well as the French government that took over control in the past, giving it a flavour that is quite unlike any other. Archaeological finds

suggest that Karaikal was a part of the Pallava Kingdom back in the 8th century. Karaikal became a French Colony in 1674 and the French held control of the region with occasional interruption from the British and Dutch until Puducherry, Karaikal, Mahe, and Yanam was merged with Indian Union de facto on November 1, 1954 and Union Territory of Puducherry was formed. Union Territory of Puducherry was treated as one district i.e., Puducherry district for administrative purpose till May 2005. Karaikal is a newly created district of the Union Territory of Puducherry which came into existence with effect from June 1, 2005.

Karaikal District is a small coastal district located in the tail end of Cauvery River delta basin. It is located 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.

Karaikal is known for its rich religious heritage, and is a destination for those seeking leisure and serenity. Karaikal is known all over the country for its unique and the only temple devoted to the Lord Saneeswara (Lord Saturn) at Thirunallar. Karaikal is the Gateway to various places of worship in the

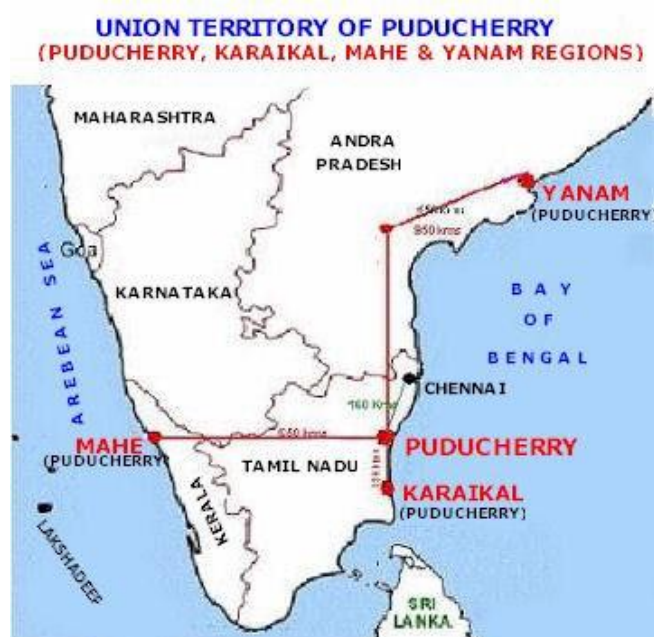


Figure 1: Four regions of U.T. of Puducherry

eastern coast of Tamil Nadu. Two famous shrines, Velankanni for Christians and Nagore for Muslims are nearby Karaikal. The French flavour still persists in the peaceful land of Karaikal.

a. District Administrative Set-up

The District Collector is the official representative to the Lieutenant Governor of the U.T. and Chief Co-ordinator and Liaison Officer to all Government departments of Karaikal district. District Collectorate, Karaikal is the functional headquarters of Karaikal District.

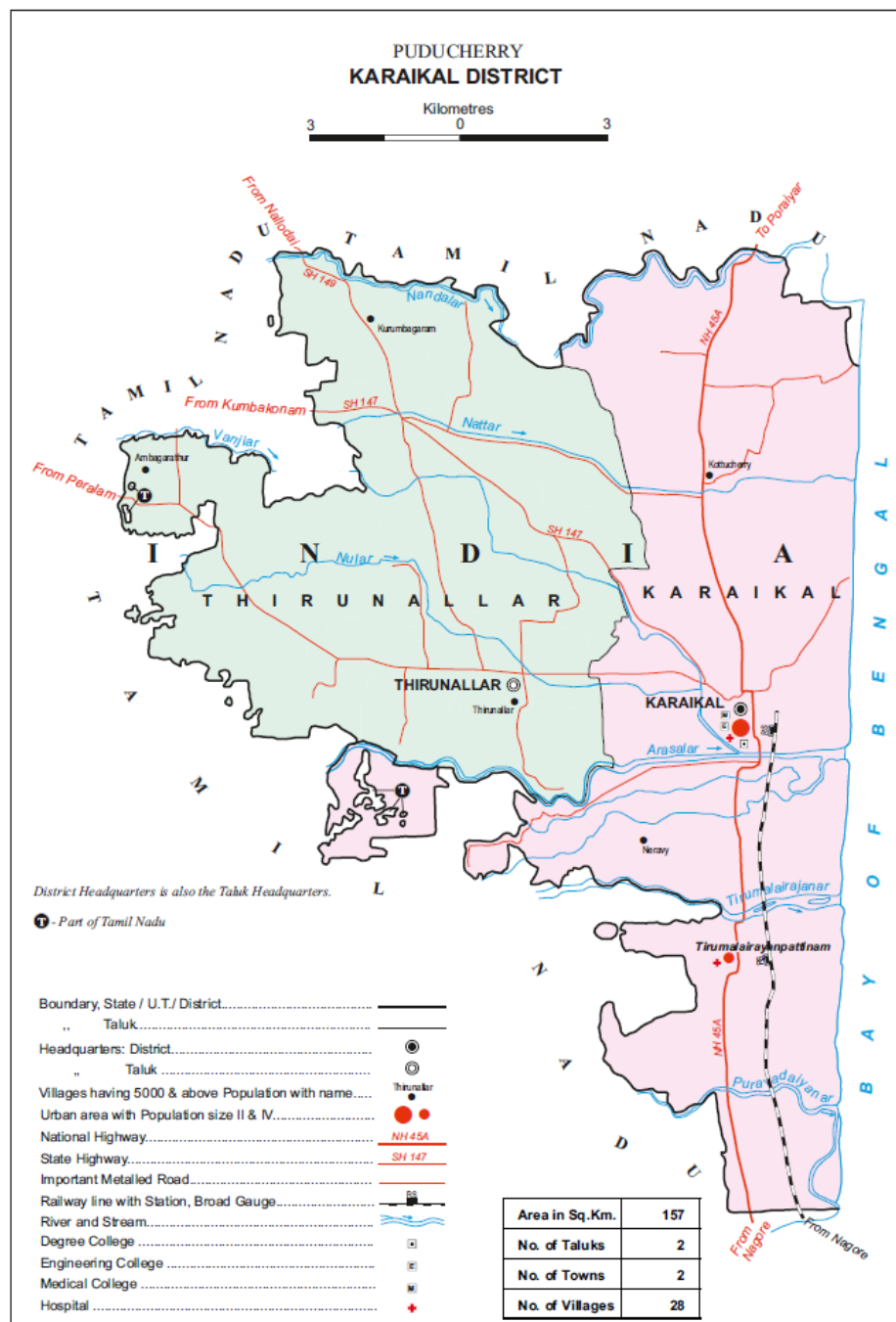


Table 1: Karaikal District Map

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.

b. Local institutions

For local administration purpose the district is divided into Municipality for urban areas and Commune Panchayats for rural areas. There are one (1) Municipality and five (5) Commune Panchayats in Karaikal district as detailed in table below. The chairman of the Municipal council/Commune Panchayat is issuing relevant directions in the day today administration and the Commissioner has to consult the Chairman in policy matters. In the absence of council, the Commissioner Municipality/Commune Panchayats looks after the administration. The Deputy Director (LAD) is monitoring the functioning of Municipality/Commune Panchayat in the district and the files have to be submitted to the Collector through Deputy Director as he is exercising the power of council in the absence of Elected body.

Urban Divisions of Local Administration		
Block	Municipality	Ward
Karaikal	Karaikal	1. Keezhakasakudy
		2. Thalatheru
		3. Ammankoilpathu
		4. Kovilpathu
		5. Puliankottai Salai
		6. Dharmapuram
		7. Water Tank
		8. Valatheru
		9. Maideenpalli

		10. Ammaiyarkoil
		11. Kadersulthan
		12. Kothukulam
		13. Anthoniarkoil
		14. Madhakoil
		15. Madagadi
		16. Kirambuthottam
		17. Oduthurai
		18. Akkaraivattam
Rural Divisions of Local Administration		
Block	Commune Panchayat	Village
Karaikal	Kottucherry	1. Poovam
		2. Varichikudy
		3. Thiruvettakudy
		4. Kottucherry (North)
		5. Kottucherry (South)
	Nedungadu	1. Kurumbagaram
		2. Ponpethi
		3. Melakasakudy
		4. Nedungadu
	Neravy	1. Vizhidhiyur
		2. Keezhamanai
		3. Neravy (North)
		4. Neravy (South)
	Thirumalairayan Pattinam	1. T.R.Pattinam (North)
		2. T.R.Pattinam (South)
		3. T.R.Pattinam (Central)
		4. T.R.Pattinam (East)
		5. Vanjore
	Thirunallar	1. Ambagarathur
		2. Nallambal
		3. Sethur

	4. Sellur
	5. Karukkankudy
	6. Surakudy
	7. Thirunallar (North)
	8. Thirunallar (South)
	9. Pettai

Table 2: Urban and Local Divisions of Local Administration in Karaikal District

Most of the developmental works in the district are looked after by the Municipality and Commune Panchayats. In view of the expanding role of the public administration in the Union Territory, Government has taken up many activities and has set up several offices in the district such as Adi dravidar Welfare, Civil Supplies and Consumer Affair Department, Agriculture Department, Animal Husbandry, District Industries Centre, Education, Electricity, Public Works, Health, Fisheries, Labour and Employment, Police, Rural development, Social Welfare and Women and Child Development, Transport department etc.

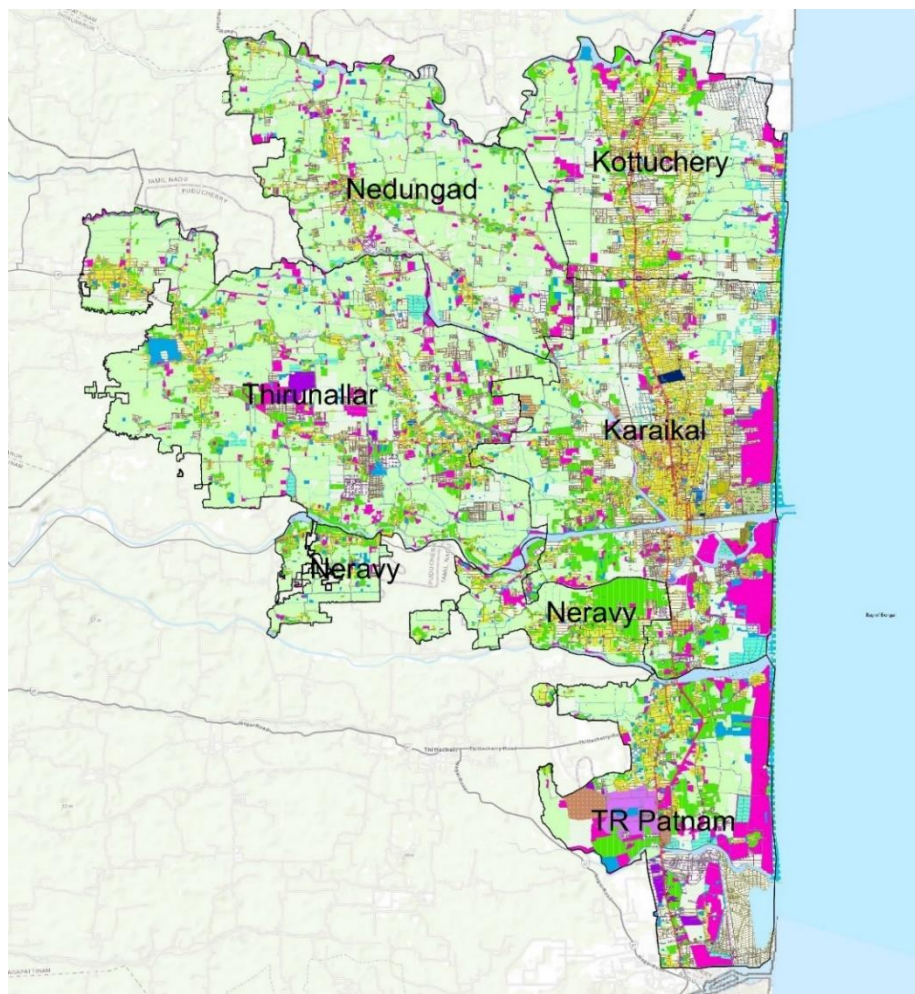


Figure 2: Local Administration Map of the District

c. Natural Resources

Water bodies

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. The details of the rivers flowing through Karaikal district is given in following table:

S. No.	Name of the River	Length (Km)	Drain entering in the River
1	Nandalar	15.2	Konnakavali drain
2	Nattar	12.6	Andoor and Kottuchery drain
3	Vanjiyar	12.3	Nedungadu drain
4	Noolar	16.6	Amagarthur drain and Thirunallar drain
5	Arasalar	11.76	Karaikal drain
6	Thirumalairajanar	10.22	T.R. Pattinam drain
7	Pravadayanar	3.35	Polagam drain

Table 3: Rivers of Karaikal District

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 Kottucherry 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 Pravadayanar and the Thirumalairajanar are the branches of Kodamurutti. Pravadayanar 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 Kottuchcherry Communes for a distance of about 15.15 km. before it finds its outlet into the sea a little South of Tarangambadi.

Karaikal district is also accomplished with large number of tanks and ponds. In Karaikal district, 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

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

Karaikal district is devoid of natural forests. According to India State of Forest Report 2019 published by the Forest Survey of India, Karaikal district has 6.83 sq. kms of moderately dense forest and 8.34 sq.kms of open forest area in terms of forest canopy density classes observed from satellite data. These forest area occupies 9.66% of the geographical area of the district. To increase the green cover, Forest department is taking up plantations on government land regularly and encourages agro forestry. Under Social and Agro Forest scheme, 52.54 Ha. of land has been brought under plantation.

Karaikal district 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.

A Central Forest Nursery is being maintained by Forest Department to support Afforestation programme in the district. Regular extension programmes are conducted for student awareness and biodiversity by conducting Vanamahotsava and Other programmes in educational institutions. NGOs are also involved in all plantation activities.

d. Geography & Demography

S. No.	Particulars	U.T.	District
1	Geographical area	294 Sq. kms.	157 Sq. kms.
2	Total Population	12,47,953	2,00,222
3	Rural Population	3,95,200	1,02,120
4	Urban Population	8,52,753	98,102
5	Density of Population, persons / sq.km.	2547	1275
6	Total Literacy Rate, %	85.8	87.1
7	Male Literacy Rate, %	91.3	92.4
8	Female Literacy rate, %	80.7	82.0
9	Sex Ratio, No. of females per 1000 males	1037	1047
10	Total No. of Households	3,02,427	51,219

Table 4: Significant geographic and demographic data based on 2011 Census

Karaikal district is the second largest district in terms of area and population. According to 2011 Census, total population of Karaikal district is 2,00,222 comprising 97,809 males and 1,02,413 females. Population of the district accounts for 16.04 per cent of the total population of Puducherry U.T. Out of the total population of the district 51.0 percent live in rural areas while 49.0 percent live in urban areas.

There has been a net addition of 29,431 persons during 2001 – 2011. The decadal growth rate of the district works out to 17.23 percent. The decadal growth rates of rural and urban areas of the districts are 5.99 per cent and 31.79 per cent respectively. The growth rate of rural population is very less in the district since the speed of urban growth is significantly high.

Density of population of Karaikal district is 1275 persons per sq. km. At Taluk level the density of population varies from 1660 persons per sq.km in Karaikal Taluk and 799 persons per sq. km in Thirunallar Taluk. In rural areas of the district the density of population works out to 860 persons while in urban areas it comes to 2,561 persons per sq. km.

e. Land-use pattern

The total geographical area of Karaikal district is 157 sq. km. as per the Surveyor General of India, where as the Survey and Land Records of Govt. of Puducherry UT shows that the area of Karaikal district is 160.12 sq. km. Hence, the area figures shown in the table given above will not tally with the Surveyor General of India's area figures. The below mentioned table shows that out of 16,012 hectares of land, 7,936 hectares are used for non-agricultural and other purposes which shows that only 50.44 percent is being used for cultivation. Karaikal is fully irrigated by Cauvery water through canals, which are the main sources of irrigation. The main soil type of the district is coastal alluvium which is more suitable for the cultivation of Paddy and Pulses. The classification of area by different types of land use is given below:

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

Table 5: Karaikal district land use pattern as per 2011 Census

f. Climate

Karaikal district is situated on the east coast of India, near latitude 11° N in the deltaic region of the Cauvery and experiences tropical maritime type of climate with small daily range of temperature and moderate rainfall.

December and January are the coolest months with the maximum of about 28°C and the minimum of about 23°C. In Karaikal; the minimum temperature as low as 16°C has been recorded. The diurnal ranges of temperature are generally small throughout the year, being highest (about 10°C) in May and June, and the least (about 5°C) during November to February.

Karaikal has an annual average rainfall of about 126 cm., 68 percent of which occurs during October to December. The amount of rainfall during the south-west monsoon period is small, being less than 20 per cent of the annual rainfall. November is the rainiest month, accounting for about a third of the annual total. The range of variation of annual rainfall is wide, so that significant variations in rain fall from year to year may be expected. Drought conditions with the annual rainfall of less than 75 percent of the normal may be expected once in three years on an average. In a year there are on an average about 55 rainy days (Days with rainfall of 2.5 mm. or more).

The level of humidity and the pattern of cloudiness and surface winds are the same as in Puducherry. Although slight variations in the month wise occurrence of depressions and storms are noticeable, thunder-storms generally occur during April to November, particularly in April, September and October.

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

Sl. No.	Urban Local bodies	No. of Wards	No. of Households	Population	Solid Waste Generated per day
1	Municipal corporations (Nagar Nigam or Mahanagar Palika)	Nil	Nil	Nil	Nil
2	Municipalities (Nagar Palikas): Karaikal Municipality	18	22503	86838	40 MT
3	Nagar panchayats (Town area Councils)	Nil	Nil	Nil	Nil

Sl. No.	Local Bodies	No. of Village panchayats	No. of House holds	Population	Solid Waste Generated per day
1	Block /Taluk / Mandal Tehsils	-	-	-	-
2	Village/Gram Panchayats				
	Kottucherry Commune Panchayat	05	5789	23186	6.5 MT
	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	Gap identification	Action Plan	Responsible Agencies	Timeline for completion of action plan
1.	Segregation				
(i)	Segregation of waste at source	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	No gaps; 100% manual sweeping is carried out in ULBs – i.e. Karaikal Municipality; In village panchayats manual sweeping is done in public and commercial places.	-	-	-
(ii)	Mechanical Road Sweeping & Collection	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	No gaps; 100% collection is Achieved.	-	-	-

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(ii)	Arrangement for door to door collection	No gaps; Door to Door collection provided in all Blocks of ULBs. In village panchayats community bins are placed.	-	-	-
(iii)	Waste Collection trolleys with separate compartments	No gaps; Trolleys are not required for ULBs as the door to door collected waste is directly transferred to mini trucks.	-	-	-
(iv)	Mini Collection Trucks with separate compartments	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)	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
			(ii) 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.	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	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	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)	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 wet waste.	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	At present one Material Recovery Facility (MRF) is functioning in Karaikal Municipality. 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. Karaikal Municipality has tied up with cement plant for coprocessing. Commune Panchayats are not having suitable facility for dry waste management at present.	(i) DPR preparation for establishing MRF in commune panchayats for dry waste management or establishing linkage with nearby facility in Karaikal Municipality.	Commissioners of all Commune Panchayats.	Feb 2022
			(ii) Establishment of MRF in all commune panchayats as per DPR.	Commissioners of all Commune Panchayats.	Dec 2022
			(iii) 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	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
			(ii) 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	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	Solid waste management contract of Karaikal Municipality has been	Commune Panchayat shall also initiate involvement of NGOs on creating awareness	Commissioners of all Commune Panchayats.	June 2022

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		entrusted with the NGO called Hand in Hand Inclusive Development and Services who are taking care of complete SWM operations and awareness creation.			
(vii)	EPR of Producers: Linkage with Producers / Brand Owners	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	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	No gaps; By-laws have been notified by the Municipalities for effective implementation of Solid Waste Management. Notification on ban of single use plastic was published and enforced.	-	-	-

Adequacy of funds: It is estimated that about 7.72 Crore Rupees is required for establishing the required SWM infrastructure in the district. The current operational expenditure is about 6.43 Crores per year. It is a known fact that the local bodies are cash strapped for effective solid waste management. Funds are provided to the local bodies from SBM and State Budget. Local bodies are also generating resources from user fees and fines. However, the fund is inadequate to meet the requirement.

(ii) Plastic waste Management

a. Current status related to Plastic waste management

	Urban Local bodies	Estimated quantity of Plastic Waste Generated per day
1	Karaikal Municipality	5.6 MT

	Local Bodies	Plastic Waste Generated per day
1	Kottucherry Commune Panchayat	0.02 MT
2	Neravy Commune Panchayat	0.03 MT
3	Nedungadu Commune Panchayat	0.02 MT
4	T.R. Pattinam Commune Panchayat	0.3 MT
5	Thirunallar Commune Panchayat	0.3 MT

b. Identification of gaps and Action plan:

S. No.	Action points for Municipalities / Commune Panchayats	Gap identification	Action Plan	Responsible Agencies	Timeline for completion of action plan
1.	Door to Door collection of dry waste including PW	No gaps; 100% door to door collection of dry waste is implemented by the ULBs.	-	-	-

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S. No.	Action points for Municipalities / Commune Panchayats	Gap identification	Action Plan	Responsible Agencies	Timeline for completion of action plan
2.	Facilitate organized collection of PW at waste transfer point or Material Recovery Facility.	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
3.	PW collection centers.	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
4.	Awareness and education programs implementation	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	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	Present Status
Total C & D waste generation in MT per day (As per data from Municipal Corporations / Municipalities)	0.75 MT
Does the District has access to C&D waste recycling facility?	Not required

b. Identification of gaps and Action plan:

S. No.	Action points for Municipalities / Commune Panchayats	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.	No gaps; C&D waste generation is very low and it is mostly sold by the generators for land filling and they do not reach the Municipal solid waste. However, Karaikal Municipality has identified and earmarked separate land for setting up of common C&D waste deposition point in the existing MRF.	-	-	-

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S. No.	Action points for Municipalities / Commune Panchayats	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?	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	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, lower layers of road pavements, colony and rural roads	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.	IEC on C & D waste management	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	Quantity
Total no. of Bedded Healthcare Facilities	24
Total no. of non-bedded HCF	35
No. of HCFs authorized by SPCBs/PCCs	40
No of Common Biomedical Waste Treatment and Disposal Facilities (CBWTFs)	1 No. (Facility existing in Puducherry is Collecting and disposing BMW of Karaikal region)
Capacity of CBWTFs	10,000 Kg/day
No. of Deep burials for BMW if any	Nil
Quantity of biomedical waste generated per day	782 Kg/day
Quantity of biomedical waste treated per day	782 Kg/day

b. Identification of gaps and Action plan:

S. No.	Action points	Gaps	Action Plan	Responsible agency	Timeline for completion of action plan
1.	Inventory and Identification of Healthcare Facilities	Inventory of all HCFs including clinics, hospitals, veterinary hospitals, Aayush hospitals, animal houses, etc., generating biomedical waste has been carried out and directions issued to all HCFs for obtaining BMW Authorization by PPCC.	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	Gaps	Action Plan	Responsible agency	Timeline for completion of action plan
2.	Adequacy of facilities to treat biomedical waste	No gaps; Biomedical Waste generated in the district is disposed to CBMWTF located at Puducherry and the capacity is adequate.	-	-	-
3.	Tracking of BMW	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	No gaps; Periodical training programs are conducted	-	-	-
5.	Adequacy of funds	No gaps; Adequate funds are allocated by Govt. to the HCFs for BMW management.	-	-	-
6.	Compliance to Rules by HCFs and CBWTFs	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	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

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S. No.	Action points	Gaps	Action Plan	Responsible agency	Timeline for completion of action plan
8.	Wastewater treatment	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	Present Status
No of Industries generating HW	10 Nos.
Quantity of HW in the district	359 MT/Annum
(i) Quantity of Incinerable HW	2 MT/Annum
(ii) Quantity of land-fillable HW	0 MT/Annum
(iii) Quantity of Recyclable / utilizable HW	2648 MT/Annum
No of captive/common TSDF	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	0 Nos.

b. Identification of gaps and action plan:

S. No.	Action points	Gaps	Action Plan	Responsible agency	Timeline for completion of action plan
1	Regulation of industries and facilities generating Hazardous Waste	At present, there are 10 Hazardous waste generating industries in Karaikal District and all are authorized by PPCC.	PPCC should ensure that all hazardous waste industries are authorized and a system of safe disposal is in place.	Member Secretary, PPCC	Dec 2022
2	Establishment of collection centers	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	Commissioner, Karaikal Municipality	Feb 2022

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S. No.	Action points	Gaps	Action Plan	Responsible agency	Timeline for completion of action plan
			collection and disposal of domestic hazardous Wastes shall be maintained and shall be submitted to PPCC regularly.		
			(ii) 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
3	Training of workers involved in handling / recycling / disposal of HW	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	No gaps; There is no landfillable HW generators in the district. The recyclable and incinerable hazardous wastes generated by the industries is currently disposed to authorized incinerators and recyclers in the neighboring states.	-	-	-
5	Contaminated sites	No gap; There are no any such sites where soils/ sediments/ground water contaminated due to dumping of industrial wastes in the district	-	-	-

(vi) E-Waste Management

a. Current Status related to E-Waste Management

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

b. Identification of gaps and action plan:

S. No.	Action points	Gaps in implementation	Action Plan	Responsible agency	Timeline for completion of action plan
1	Inventory / Generation of E-Waste / Bulk-waste generators	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

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S. No.	Action points	Gaps in implementation	Action Plan	Responsible agency	Timeline for completion of action plan
2	E-Waste collection points	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	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. (ii) 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	There are no records of illegal E-waste recycling / dismantling in the district.	-	-	-
5	Integration of informal sector	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	Gaps in implementation	Action Plan	Responsible agency	Timeline for completion of action plan
	Awareness and Education	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	Present Status
<p>Number of Automatic Air Quality monitoring stations in the district.</p> <ul style="list-style-type: none"> - Operated by SPCB / State Govt / Central govt./ PSU agency : - Operated by Industry: 	<p>Operated by PPCC – Nil (Proposed to install on CAAQM in Karaikal; Location identified and proposal under progress)</p> <p>Operated by Industry – 3 Nos. (at Karaikal Port)</p>
Number of manual monitoring stations operated by SPCBs	3 Nos.
Name of towns / cities which are failing to comply with national ambient air quality stations	Nil
No of air pollution industries	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 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	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Identification of prominent air polluting sources?	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	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	At present there is no Continuous Ambient Air Quality Monitoring Station in the district. 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. 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.	Member Secretary, PPCC	Dec 2022
4	District Level Action Plan for Air Pollution	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

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S. No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
5	Hot Spots for air pollution in district	No air pollution hot spots are located in the district and the air quality is meeting the NAAQM Standards.	-	-
6	Awareness on Air Quality	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	Present Status
Rivers	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)	17.3 Km
Nalas/ Drains/Creeks meeting Rivers	56 Nos.
Lakes / Ponds	Lakes – 6 Nos. - 75 ha .99 a Ponds - 549 Nos. - 97 ha.90a.03ca
Total Quantity of sewage from towns and cities in District	10 MLD
Quantity of industrial wastewater	0.4 MLD
Percentage of untreated sewage	20.7 % of untreated sewage is entering into the drains
Details of bore wells and number of permissions given for extraction of groundwater	Agriculture - 387 Drinking - 112 Industry - 42
Groundwater polluted areas if any	Nil
Polluted river stretches if any	Arasalar – 11.76 Km

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

S. No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1.	Inventory of water bodies	Inventory of waterbodies has been hosted in the website of district administration.	-	-
2.	Quality of water bodies in the district	PPCC regularly conducts seasonal water quality monitoring in Arasalar river. Local bodies and PPCC have monitored water quality of few ponds. Ground water quality is monitored by the State Ground Water Unit, Agriculture Department. However, this needs to be strengthened to collect periodic water quality information on all rivers, drains, creeks, lake and ponds. The data need to be made available with district administration and information need to be disseminated. Following actions to be taken:		
		(i) Creation of District Level Environment Monitoring Cell in the District Administration to ensure periodic monitoring of water bodies for specific parameters in association with PPCC, PWD, Local bodies and State Ground Water Unit. Data shall be maintained and disseminated in the website of district administration.	District Administration	Feb 2022
		(ii) PWD and Local bodies to monitor the rivers, drains, lakes and ponds under their control as per CPCB Guidelines; State Ground Water unit to monitor ground water quality regularly; Reports to be submitted by all agencies to the District Level Environment Monitoring Cell once in three months.	Executive Engineer, PWD – I&PH; Commissioners of all Local Bodies and Hydrogeologist, State Ground Water Unit.	March 2022 onwards
3	Hot spots of water contamination	PPCC is monitoring the waterbodies for contamination. Arasalar River has been identified as contaminated river stretch and action plan has been prepared and	Member Secretary-PPCC; Executive Engineer - PWD – I&PH; and commissioners of	Dec 2022

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S. No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
		implementation of the same is under progress and expected to be completed by Dec 2022.	all Local Bodies	
4	Protection of river / lake water front	District has implemented Open Defecation Free Scheme. Also, disposal of solid wastes along river and lake front is strictly monitored and regulated by the local bodies. Idol immersion is not carried out in river and lake front and is carried out only in the designated site at coastal water of Pattinacherry village following norms prescribed by CPCB.	-	-
5	Inventory of sources of water pollution	PWD and Local bodies to identify the sources of water pollution in the waterbodies and drains within their jurisdiction and submit report to District Administration with copy to PPCC. Action plan and implementation to follow in time bound manner.	Executive Engineer, PWD – I&PH / Commissioners of all Local Bodies	Feb 2022
6	Oil spill disaster management (for coastal districts)	District Oil Spill Crisis Management Group and District Oil Spill Disaster Contingency Plan for the district shall be created with the help of the Disaster management cell of the district administration	Dy. Collector (Disaster Management)	Dec 2022
7	Protection of flood plains	Already formulated a District Disaster Management Plan under which flood management and protection of floodplains is included.	-	-
8.	Rejuvenation of groundwater	Action plan to be prepared by the district Ground Water Authority to rejuvenate / recharge Ground Water, with budget and clear schedule of implementation.	Member Secretary, PGWA, Hydrogeologist, State Ground Water Unit	June 2022
9	Complaint redressal system	Complaint redressing system based on Mobile App and Online is available	-	-

4.2 Domestic Sewage Managment

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

Details of Data Requirement	Present Status
No of Class-II towns and above	1 No.
No of Class-I towns and above	Nil
No of Towns STPs installed	Nil
No of Towns needing STPs	1 No.
No of ULBs having partial underground sewerage network	Nil
No of towns not having sewerage network	1 No.
Total Quantity of Sewage generated in District from Class II cities and above	10 MLD
Quantity of treated sewage flowing into Rivers (directly or indirectly)	Nil
Quantity of untreated or partially treated sewage (directly or indirectly)	2.07 MLD
Quantity of sewage flowing into lakes	Nil
Total available Treatment Capacity	Nil

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

S. No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Sewage Treatment Plants (STPs)	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		

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S. No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
		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	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

Number of Red, Orange, Green and White industries in the District	Red – 8 Nos. Orange – 84 Nos. Green – 104 Nos. White – 12 Nos.
No of Industries discharging wastewater	8 Nos.
Total Quantity of industrial wastewater generated	0.4 MLD
Quantity of treated industrial wastewater discharged into Nalas / Rivers	Nil
Common Effluent Treatment Facilities	Nil
No of Industries meeting Standards	8 Nos.
No of Industries not meeting discharge Standards	Nil

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

S. No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Compliance to discharge norms by Industries	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	Mobile App and online complaint redressal system has been provided 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
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	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Monitoring of Mining activity	There is no sand mining quarry or other mining leases issued in the district.	-	-
2	Inventory of illegal mining if any mining	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	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
No. of noise measuring devices available with various agencies in district	Traffic Police – 1 No. PPCC – 1 No.

b. Identification of gaps and action plan:

S. No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Availability of Sound/Noise Level Meters.	Sufficient number of Noise Level Meters are available with PPCC and Traffic Police.	-	-
2	Ambient Noise Level monitoring.	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
3	Signboards in Noise zones	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	Mobile App and online complaint redressal system has been provided 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 of Karaikal faces the threat of coastal pollution due to the rapidly increasing tourism activities, resorts and hotels. Besides waste water discharged from domestic and commercial activities to the nearby drainage canals finally enters in to the sea through the creeks and channels. Public Works Department has prepared proposal to bring entire urban households in underground sewer connectivity with appropriate sewage treatment system.

Industries located nearer to the coast are ensured to discharge the effluent only with proper treatment. The coastal water quality of the region needs to be monitored regularly and suitable action to prevent discharge of any untreated waste water to be taken up.

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", 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.

The shoreline to the north of breakwaters of Karaikal Port and Fishing Harbour is vulnerable to coastal erosion. Karaikal Port, PWD and Fisheries department have to closely monitor the shoreline changes in this zone and initiate necessary shoreline protection measures in case of grave erosion problems.

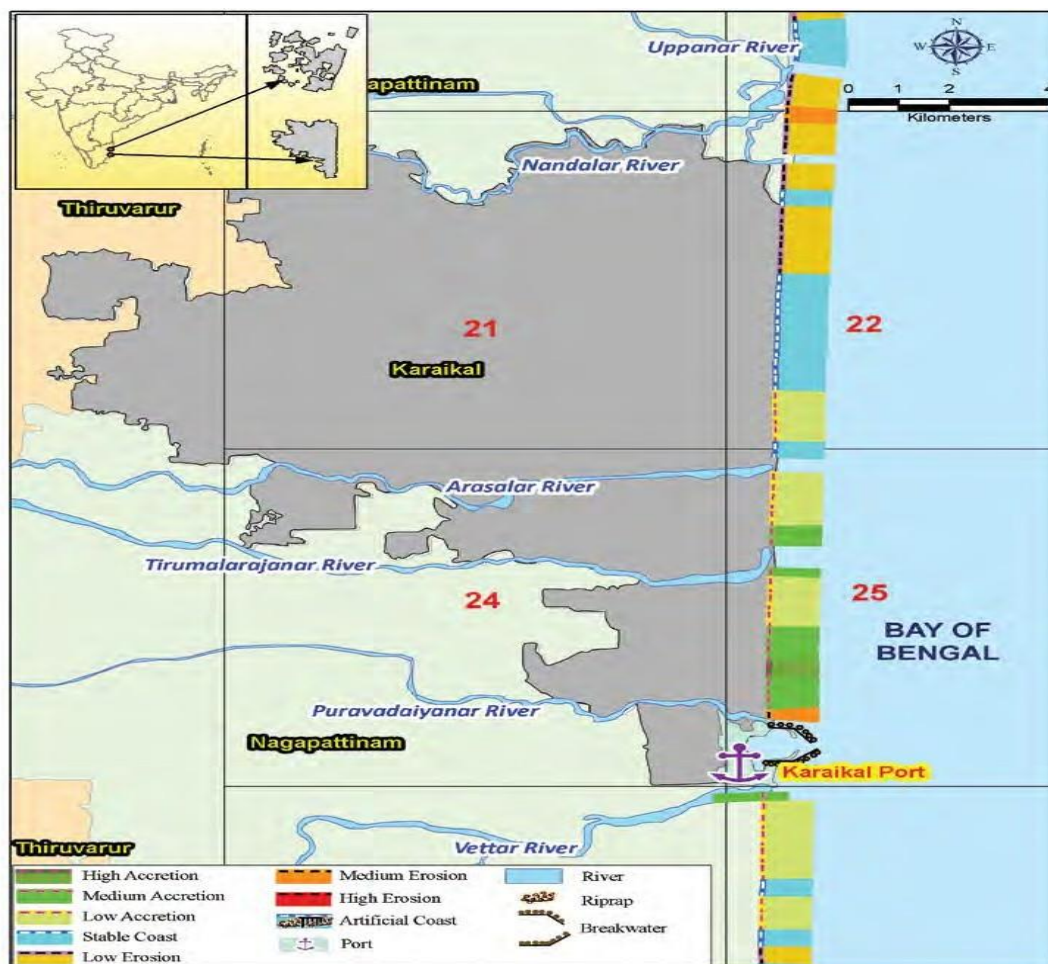


Table 6: Shoreline changes map of Karaikal district (Source: National Assessment for Shoreline Change: Puducherry Coast, NCSCM, 2011)

b. Identification of gaps and action plan:

S. No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Coastal pollution	Monitoring of coastal water quality regularly and submission of report to District Level Environment Monitoring Cell	PPCC	Continuous activity
2	Shoreline Protection	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 (Envt.& Safety), Karaikal Port, Executive Engineer, PWD – I&PH	Continuous activity

9.0 Increasing Green Cover:

a. Current Status of Green cover

India State of Forest Report 2019 published by the Forest Survey of India has assessed that Karaikal district has 6.83 sq. kms under moderately dense forest and 8.34 sq.kms under open forest which covers 9.66% of the geographical area of the district. 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.

Karaikal district does not have any natural forests. 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	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Inventory of land available for afforestation programme	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

S. No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
2	Enhancing green cover	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

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 (Our Water) 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 of the MoEFCC. 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.

Recently, in September 2021, Jal Sakthi Kendra has been established in the district 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	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
1	Augmentation of surface waterbodies	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	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

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S. No.	Action points	Gaps and Action Plan	Responsible agency	Timeline for completion of action plan
		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

Annexure 1: Data Sheet for Preparation of District Environment Plan for 7 Thematic Areas

1.0 Waste Management Plan

(i) Solid Waste Management Plan (for each ULB)

o.	Action Areas	Details of Data Requirement	Units of Measurable Outcome	Please enter Measurable Outcome for District	ULB1	LB1	LB2	LB3	LB4	LB5
	Name of Urban Local Body (ULB)		[name of ULB]	Karaikal District	Karaikal Municipality	Kottucherry Commune Panchayat	Neravy Commune Panchayat	Nedungadu Commune Panchayat	T.R. Pattinam Commune Panchayat	Thirunallar Commune Panchayat
	No of ULBs in the District		[Nos]	6						
	Population		[Nos as per 2011 census]	190151	86838	23186	12841	17146	21335	38876
SW1	Report on inventory of total solid waste Generation									
SW1a		Total solid waste Generation	[in MT/Day] or [Not estimated]	65.5	40	6.50	5.50	3.50	5.00	5.00
SW1b		Qty. of Dry Waste segregated	[in MT/Day] or [Collection Not initiated]	5.6	5.6	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
SW1c		Qty. of Wet Waste segregated	[in MT/Day] or [Collection Not initiated]	25.5	25.5	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
SW1d		Qty. of C&D Waste segregated	[in MT/Day] or [Collection Not initiated]	0.75	0.75	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
SW1e		Qty. of Street Sweeping	[in MT/Day] or [Not estimated]	9	5	0.50	0.5	0.50	0.50	2.00

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SW1f		Qty. of Drain Silt	[in MT/Day] or [Not estimated]	3.05	2.25	0.10	0.10	0.10	0.20	0.30
SW1g		Qty. of Domestic Hazardous Waste(DHW) collected	[in MT/Day] or [No Facility]	0.1	0.10	No facility	No facility	No facility	No facility	No facility
SW1h		Qty. of Other Waste (Horticulture, sanitary waste, etc.)	[in MT/Day] or [Qty not estimated]	1.50	0.80	0.10	0.10	0.10	0.2	0.20
SW1i		No of Old dump sites	[Nos] or [None]	1	1	None	None	None	None	None
SW1j		Qty stored in dumpsites	[MT] or [Not estimated]	8600	86000	0	0	0	0	0
SW1k		No of Sanitary landfills	[Nos] or [None]		None	None	None	None	None	None
SW1l		No of wards / village panchayats	[nos]	45	18	5	4	4	5	9
SW2	Compliance by Bulk Waste Generators									
SW2a		No of BW Generators	[numbers] or [inventory not done]	116	113	0	0	0	1	2
SW2b		No of on-site facilities for Wet Waste	[numbers] or [No data]	62	60	0	0	0	1	1
SW3	Compliance in segregated waste Collection SW Collection									
SW3a		Total generation	[Automatic] from SW1a	65.5	40	6.50	5.50	3.5	5	5

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SW3 b		Wet Waste	[in MT/Day] or [Collection Not initiated]	35.8	25.5	1.00	3.5	0.8	3	2
SW3 c		Dry Waste	[in MT/Day] or [Collection Not initiated]	15.5	5.6	4.80	1.5	2	1.1	0.5
SW3 d		C&D Waste	[in MT/Day] or [Collection Not initiated]	0.75	0.75	0	0.00	0.00	0	0.00
SW4	Waste Management Operations									
SW4 a		Door to Door Collection	[100%] / [partial %] / [not initiated]		100%	10%	Not initiated	Not initiated	Not initiated	Not initiated
SW4 b		Mechanical Road Sweeping	[100%] / [partial%] / [not initiated]		Not initiated	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
SW4 c		Manual Sweeping	[100%] / [partial%]		100%	Not initiated	25%	10%	10%	100%
SW4 d		Segregated Waste Transport	[100%] / [partial %] / [not initiated]		100%	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
SW4 e		Digesters (Bio- methanation)	[% of WW] / [not initiated]		4%	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
SW4 f		Composting operation	[% of WW] / [not initiated]		96%	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
SW4 g		MRF Operation	[MRF used] / [not installed]	1	1	Not installed	Not installed	Not installed	Not initiated	Not installed

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SW4h		Use of Sanitary Landfill	[% of SW collected] / [no SLF]	No SLF	No SLF	No SLF	NO SLF	No SLF	NO SLF	No SLF
SW4i		Reclamation of old dumpsites	[initiated] / [not initiated]	Under process	Under process	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
SW4j		Linkage with Waste to Energy Boilers / Cement Plants	[initiated] / [not initiated]	Initiated (Ultra Tech Cement, Arialur)	Initiated (Ultra Tech Cement, Arialur)	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
SW4k		Linkage with Recyclers	[initiated] / [not initiated]	Initiated (Selva Steel Corporation, Valatheru, Karaikal)	Initiated (Selva Steel Corporation, Valatheru, Karaikal)	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
SW4l		Authorization of waste pickers	[initiated] / [not initiated]	Initiated	Initiated	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
SW4m		Linkage with TSDF / CBMWTF	[initiated] / [not initiated]	TSDF - Not initiated; CBMWTF - initiated	TSDF - Not initiated; CBMWTF - initiated	TSDF - Not initiated; CBMWTF - initiated	TSDF - Not initiated; CBMWTF - initiated	TSDF - Not initiated; CBMWTF - initiated	TSDF - Not initiated; CBMWTF - initiated	TSDF - Not initiated; CBMWTF - initiated
SW4n		Involvement of NGOs	[initiated] / [not initiated]	Initiated (Dora & HIH)	Initiated (Dora & HIH)	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
SW4o		Linkage with Producers / Brand Owners	[initiated] / [not initiated]	Initiated	Initiated	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
SW4p		Authorisation of Waste Pickers		Yes	Yes	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated

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SW4 q		Issuance of ID Cards	[initiated] / [not initiated]	Yes	Yes	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
SW5	Adequacy of of Infrastructure									
SW5 a		Waste Collection Trolleys	[Nos. Required] / [Nos. Available]	59/2	Not Required	5/0	8/2	6/0	10/0	30/0
SW5 b		Mini Collection Trucks	[Nos. Required] / [Nos. Available]	43/28	28/23	2/0	1/0	2/0	5/2	5/3
SW5 c		Segregated Transport	[yes] / [no] / [% area covered]	No	No	No	No	No	No	No
SW5 d		Bulk Waste Trucks	[Nos. Required] / [Nos. Available]	15/7	10/7	1/0	1/0	1/0	1/0	1/0
SW5 e		Waste Transfer points	[Nos. Required] / [Nos. Available] / [Not available]	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
SW5 f		Bio-methanation units	[Nos. Required] / [Nos. Available]	1/1	1/1	0/0	0/0	0/0	0/0	0/0
SW5 h		Composting units	[Nos. Required] / [Nos. Available]	6/1	1/1	Proposed	Proposed	Proposed	Proposed	Proposed

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SW5i		Material Recovery Facilities	[used or installed] / [not available]	6/1	1/1	Proposed	Proposed	Proposed	Proposed	Proposed
SW5k		Waste to Energy (if applicable)	[Required] / [Nos. Available]	0/0	0/0	0/0	0/0	0/0	0/0	0/0
SW5l		Waste to RDF	[Required] / [Nos. Available]	0/0	0/0	0/0	0/0	0/0	0/0	0/0
SW5m		Sanitary Landfills	[Nos] / [Nos. Available]	6/0	1/0	Proposed	Proposed	Proposed	Proposed	Proposed
SW5n		Capacity of sanitary landfills	[MT] / [Nos. Available]	0	0	0	0	0	0	0
SW5o		Waste Deposit Centers (DHW)	[Nos] / [Nos. Available]	1/1	1/1	0	0	0	0	0
SW5p		Other facilities	[give or select from list]	-	-	-	-	-	--	-
SW6	Notification and Implementation of By-Laws									
SW6a		Notification of By-laws	[done] / [in progress] / [not initiated]	Done	Done	Done	Done	Done	Done	Done
SW6b		Implementation of by-laws	[done] / [in progress] / [not initiated]	Done	Done	Done	Done	Done	Done	Done

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SW7	Adequacy of Financial Status of ULB				-					
SW7 a		CAPEX Required	[INR] / [Not required]	7.72 Crores	2 crores	Rs.129.60 lakh	Rs.54 lakh	129.60 Lakh	129.60 lakhs	129.60 lakhs
SW7 b		OPEX	[INR per Year] / [% of requirement]	6.43 Crores	463.2	Rs.40.00 lakh	Rs.20 lakh	40.00 Lakh	40.00 lakhs	40.00 lakhs
SW7 c		Adequacy of OPEX	[Yes] / [No]	No	Yes	No	No	No	No	No

(ii) Plastic Waste Management (for each ULB)

No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District	ULB1	ULB2	ULB3	ULB4	ULB5	ULB6
	Name of ULB		[name of ULB]		Karaikal Municipality	Kottucherry Commune Panchayat	Neravy Commune Panchayat	Nedungadu Commune Panchayat	T.R. Pattinam Commune Panchayat	Thirunallar Commune Panchayat
	Population		[Nos as per 2011 census]	200222	86838	23186	12841	17146	21335	38876
PW1	Inventory of plastic waste generation									
PW1 a		Estimated Quantity of plastic waste generated in District	[MT/day] / [Not Estimated]	6.27	5.6	0.02	0.03	0.02	0.3	0.30
PW2	Implementation of Collection									

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PW2 a		Door to Door collection	[100%] / [partial %] / [not initiated]		100%	Not Initiated	Not Initiated	Not Initiated	Not initiated	Not Initiated
PW2 b		Segregated Waste collection	[100%] / [partial %]		100%	0	0	0	0	0
PW2 c		Plastic waste collection at Material Recovery Facility	[MRF used] / [not installed]		Yes	Not installed	Not installed	Not installed	Not initiated	Not installed
PW2 d		Authorization of PW pickers	[Nos] / [not initiated]	1 No. / Selva Steel Corporation	1 No. / Selva Steel Corporation	Not Initiated	Not Initiated	Not Initiated	Not initiated	Not Initiated
PW2 e		PW collection Centers	[Nos] / [not established]	1 No.	1 No.	Not established	Not established	Not established	Not established	Not established
PW3	Establishment of linkage with Stakeholders									
PW3 a		Established linkage with PROs of Producers	[Nos] / [not established]	1 No.	1 No.	Not established	Not established	Not established	Not established	Not established
PW3 b		Established linkage with NGOs	[Nos] / [not established]	1 No.	1 No.	Not established	Not established	Not established	Not established	Not established
PW4	Availability of facilities for Recycling or utilization of PW									
PW4 a		No. of PW recyclers	[Nos]	1	1	0	0	0	0	0

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PW4b		No Manufacturer s	[Nos]	1	1	0	0	0	0	0
PW4c		No of pyrolysis oil plants	[Nos]		0	0	0	0	0	0
PW4d		Plastic pyrolysis	[Quantity in MT sent per Month]		0	0	0	0	0	0
PW4e		Use in road making	[Quantity MT used per Month]	1	1	0	0	0	0	0
PW4f		Co-processing in Cement Kiln	[Quantity in MT sent per Month]	20 MT/Month	20 MT/ per Month	0	0	0	0	0
W5	Implementation of PW Management Rules, 2016									
W5a		Sealing of units producing < 50-micron plastic	[All sealed] / [Partial] / [no action]	All sealed	All sealed	All sealed	All sealed	All sealed	All sealed	All sealed
PW5b		Prohibiting sale of carry bags < 50 micron	[Prohibited] / [Partial] / [no action]	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited	Prohibited
PW5c		Ban on Carry bags and other single use plastics as notified by State Government	[Implemented] / [Partial] / [no action] / [No Ban]	Implemented	Implemented	Implemented	Implemented	implemented	Implemented	implemented

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PW6	Implementation of Extended Producers Responsibility (EPR) through Producers/Brand-owners									
PW6 a		No of Producers associated with ULBs	[Nos] / [None]	1 No. (Godrej Consumer Products Ltd.	None	None	None	1 No. (Godrej Consumer Products Ltd.	None	None
PW6 b		Financial support by Producers/ Brand owners to ULBs	[Nos] / [None]	None	None	None	None	None	None	None
PW6 c		Amount of PRO Support	[Rs...]	NIL	NIL	NIL	NIL	NIL	NIL	NIL
PW6 d		Infrastructure support by Producers/ Brand owners to ULBs	[Nos of Producers] / [None]	None	None	None	None	None	None	None
PW6 e		No of collection centers established by Producers/ Brand owners to ULBs	[Nos] / [None]	None	None	None	None	None	None	None

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(iii) C&D Waste Management

No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District	ULB1	ULB2	ULB3	ULB4	ULB5	ULB6
	Name of ULB		[name of ULB]		Karaikal Municipality	Kottucherry Commune Panchayat	Neravy Commune Panchayat	Nedungadu Commune Panchayat	T.R. Pattinam Commune Panchayat	Thirunallar Commune Panchayat
	Population		[Nos as per 2011 census]	200222	86838	23186	12841	17146	21335	38876
CD1	Inventory of C&D waste generation				-					
CD1a		Estimated Quantity	[Kg/Day] / [Not estimated]	750	750	0.00	0.00	0.00	0.00	0.00
CD2	Implement scheme for permitting bulk waste generators									
CD2a		Issuance of Permissions by ULBs	[Initiated] / [Not initiated]	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated
CD3	Establishment of C&D Waste Deposition centers			-	-					
CD3a		Establishment of Deposition Points	[Yes] / [No]	No	No	No	No	No	No	No
CD3b		C&D Deposition point identified	[Yes] / [No]	Yes	Yes	No	Yes	No	Yes	Yes

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CD4	Implementation of By-Laws for C&D Waste Management			-	-					
CD4a		Implementati on of By-laws	[notified] / [not notified]	Not notified	Not notified	Not notified	Not notified	Not notified	--	Not notified
CD4 b		Collection of Deposition / disposal Charges	[Initiated] / [Not initiated]	Not initiated	Not initiated	Not initiated	Not initiated	Not initiated	--	Not initiated
CD5	Establishment of C&D Waste recycling plant or linkage with such facility			-	-					
CD5a		Establishment CD Waste Recycling Plant	[Established] / [Sent to shared Facility] / [No facility exists]	No facility exists	No facility exists	No facility exists	No facility exists	No facility exists	No facility	No facility exists
CD5 b		Capacity of CD Waste Recycling Plant	[MT/Day] / [Not available]	Not available	Not available	Not available	Not available	Not available	--	Not available

(iv) Biomedical Waste Management (for each ULB)

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No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District	ULB1	ULB2	ULB3	ULB4	ULB5	ULB6
	Name of ULB		[name of ULB]		Karaikal Municipality	Kottucherry Commune Panchayat	Neravy Commune Panchayat	Nedungadu Commune Panchayat	T.R. Pattinam Commune Panchayat	Thirunallar Commune Panchayat
	Population		[Nos as per 2011 census]	200222	86838	23186	12841	17146	21335	38876
BM W1	Inventory of Biomedical Waste Generation									
BM W1a		Total no. of Bedded Hospitals	[Nos] / [No inventory]	24	13	3	2	2	1	3
BM W1b		Total no. of non-bedded HCF	[Nos] / [No inventory]	35	15	5	3	5	2	5
BM W1c		Total no. Clinics	[Nos] / [No inventory]	24	20	1	0	1	1	1
BM W1d		No of Veterinary Hospitals	[Nos] / [No inventory]	11	2	1	2	1	1	4
BM W1e		Pathlabs	[Nos] / [No inventory]	8	6	2	0	0	0	0
BM W1f		Dental Clinics	[Nos] / [No inventory]	11	11	0	0	0	0	0
BM W1g		Blood Banks	[Nos] / [No inventory]	2	1	1	0	0	0	0
BM W1h		Animal Houses	[Nos] / [No inventory]	0	0	0	0	0	0	0

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BM W1i		Bio-research Labs	[Nos] / [No inventory]	0	0	0	0	0	0	0
BM W1j		Others	[Nos] / [No inventory]	0	0	0	0	0	0	0
BM W2	Authorization of HCFs by SPCBs / PCCs									
BM W2a		Bedded HCFs	[Nos Authorized]	21	10	3	2	1	3	2
BM W2b		Non-bedded HCFs	[Nos Authorized]	19	12	3	0	1	3	0
BM W3a	Biomedical Waste Treatment and Disposal Facilities (CBMWTFs)									
BM W3a		No of CBMWTFs	[Nos] / None	0	0	0	0	0	0	0
BM W3b		Linkage with CBMWTFs	[Yes] / [no linkage]	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BM W3c		Capacity of CBMWTFs	[Adequate] / [Not adequate]	Adequate	Adequate	Adequate	Adequate	Adequate	Adequate	Adequate
BM W3d		Requirements of CBMWTFs	[Require] / [not required]	Not required	Not required	Not required	Not required	Not required	Not required	Not required
BM W3e		Captive Disposal Facilities of HCFs	[Nos] / [None]	None	None	None	None	None	None	None
BM W4	Compliance by CBMWTFs									
BM W4a		Compliance to standards	[Meeting] / [Not meeting] / [NA]	Meeting	Meeting	Meeting	Meeting	Meeting	Meeting	Meeting

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BM W4b		Barcode tracking by HCFs / CBMWTFs	[100%] / [Partly %] / [None]	None	None	None	None	None	None	None
BM W4c		Daily BMW lifting by CBMWTFs	[Kg / day]	782.57	364.2	403.5	3.62	0.5	10.25	0.5
BM W5	Status of Compliance by Healthcare Facilities									
BM W5a		Pre-segregation	[100%] / [partly %] / [None]	100	100	100	100	100	100	100
BM W5b		Linkage with CBMWTFs	[100%] / [partly %] / [None]	100	100	100	100	100	100	100

(v) Hazardous Waste Management

No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District
HW1	Inventory of Hazardous Waste			
HW1a		No of HW Generating Industry	[Nos.]	10
HW1b		Quantity of HW	[MT/Annum]	359
HW1c		Quantity of Incinierable HW	[MT/Annum]	2
HW1d		Quantity of land-fillable HW	[MT/Annum]	0
HW1e		Quantity of Recyclable / utilizable HW	[MT/Annum]	2648
HW2	Contaminated Sites and illegal industrial hazardous waste dumpsites			
HW2a		No of HW dumpsites	[Nos] / [None]	0
HW2c		Probable Contaminated Sites	[Nos] (provide list)	0

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HW3	Authorization by SPCBs/PCCs			
HW3a		No of industries authorized	[Nos]	10
HW3b		Display Board of HW Generation in front of Gate	[Nos]	10
HW3	Availability of Common Hazardous Waste TSDF			
HW3a		Common TSDF	[Exists] / [No] / [Sent to Other District within State]	Sent to other State
HW3b		Industries linkage with TSDF	[Nos.]	10
HW4	Linkage of ULBs in District with Common TSDF			
HW4a		ULBs linked to Common TSDFs for Domestic Hazardous Waste	[Yes] / [No]	No

(vi) E-Waste Waste Management

No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District
EW1	Status of facilitating authorized collection of E-Waste			
EW1a		Does the citizen are able to deposit or provide E-Waste through Toll-free Numbers in the District	[Yes] / [No]	No
EW1c		Collection centers established by ULB in District	[Nos] / [None]	None
EW1d		Collection centers established by Producers or their PROs in the District	[Nos] / [None]	None

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EW1e		Does the district has linkage with authorized E-Waste recyclers / Dismantler	[Yes] / [No]	Yes - Collection Centre available in UT with linkage to Recyclers/dismantlers in neighbouring states
EW1f		No authorized E-Waste recyclers / Dismantler	[Nos] / [None]	2 collection centres
EW2	Status of Collection of E-Waste			
EW2a		Authorizing E-Waste collectors	[Authorized] / [None]	Authorized
EW2b		Involvement of NGOs	[Yes] / [No] / [Nos]	Yes
EW2c		Does Producers have approached NGOs/ Informal Sector for setting up Collection Centers.	[Yes] / [No] / [Nos]	No
EW2d		Does ULBs have linkage with authorized Recyclers / Dismantlers	[Yes] / [No]	Yes
EW4	Control E-Waste related pollution			
EW4a		Does informal trading, dismantling, and recycling of e-waste exists in District	[Yes] / [No]	No
EW4b		Does the administration closed illegal E-Waste recycling in the District	[Yes] / [No] / [Nos]	No illegal E-waste recycling
EW4c		No of actions taken to close illegal trading or processing of E-Waste	[Nos]	0
EW5	Creation of Awareness on E-Waste handling and disposal			
EW5a		Does PROs / Producers conducted any District level Awareness Campaigns	[Yes] / [No] / [Nos]	1
EW5c		Does District Administration conducted any District level Awareness Campaigns	[Yes] / [No] / [Nos]	No

2.0 Water Quality Management Plan

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No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District
WQ1	Inventory of water resources in District			
WQ1a		Rivers	[Nos] and [Length in Km]	8 Nos. and 88.62 Km
WQ1b		Length of Coastline	[in Km]	17.3 Km
WQ1c		Nalas/Drains meeting Rivers	[Nos]	56 Nos.
WQ1d		Lakes / Ponds	[Nos] and [Area in Hectares]	6 Nos.of Lakes - 75 ha .99 a 549 Nos. of Ponds - 97 ha.90a.03ca
WQ1e		Total Quantity of sewage and industrial discharge in District	[Automatic] (SW1a+IW1b)	2.07 MLD
	Control of Groundwater Water Quality			
WQ2a		Estimated number of bore-wells	[Nos]	66 Deep wells and 24 shallow bore wells sunk and maintained by PWD / LAD
WQ2b		No. of permissions given for extraction of groundwater	[Nos]	No
WQ2c		Number of groundwater polluted areas	[Nos]	0
WQ2d		Groundwater Availability	[adequate] / [not adequate]	Adequate
WQ3	Availability of Water Quality Data			
WQ3a		Creation of monitoring cell	[Yes] / [No]	Yes, State Ground Water Authority
WQ3b		Access to Surface water and groundwater quality data at DM office	[Available] or [Not available]	Available
WQ4	Control of River side Activities			
WQ4a	Control of River side Activities	River Side open defecation	[Fully Controlled] / [Partly controlled] / [no Measures taken]	Partially controlled

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WQ4b		Dumping of SW on river banks	[Fully Controlled] / [Partly controlled] / [no Measures taken]	Partially controlled
WQ4c		Control measures for idol immersion	[Measures taken] / [Measures taken post immersion] / [No Measures taken]	Measures Taken
WQ5	Control of Water Pollution in Rivers			
WQ5a		Percentage of untreated sewage	[%] (automatic SM1g/SM1a)	100%
WQ5b		Monitoring of Action Plans for Rejuvenation of Rivers	[Monitored] / [Not monitored] [not applicable]	Monitored
WQ5c		No of directions given to industries for Discharge of Untreated industrial wastewater in last 12 months	[Nos]	
WQ6	Awareness Activities			
WQ6a		District level campaigns on protection of water quality	[Nos in previous year]	Yes
WQ6b	Oil Spill Disaster Contingency Plan			
WQ6a		Creation of District Oil Spill Crisis Management Group	[Created] / [Not Created]	Created
WQ6b		Preparation District Oil Spill Disaster Contingency Plan	[Prepared] / [Not Prepared]	Not Prepared
WQ7	Protection of Flood plains			
WQ7a		Encroachment of flood plains is regulated.	[Yes] / [No]	Yes
	Rainwater Harvesting			
WQ8a		Action plan for Rain water harvesting	[Implemented] / [Not implemented]	Implemented

3.0 Domestic Sewage Management Plan

No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District
SM1	Inventory of Sewage Management			

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SM1a		Total Quantity of Sewage generated in District from Class II cities and above	[MLD]	10 MLD
SM1b		No of Class-II towns and above	[Nos]	1
SM1c		No of Class-I towns and above	[Nos]	Nil
SM1d		No of Towns needing STPs	[Nos]	1 No.
SM1e		No of Towns STPs installed	[Nos]	NIL
SM1f		Quantity of treated sewage flowing into Rivers (directly or indirectly)	[MLD]	NIL
SM1g		Quantity of untreated or partially treated sewage (directly or indirectly)	[Automatic]	2.07 MLD
SM1h		Quantity of sewage flowing into lakes	[MLD]	NIL
SM1i		No of industrial townships	[Nos]	NIL
SW2	Adequacy of Available Infrastructure for Sewage Treatment			
SM2a		% sewage treated in STPs	[Automatic]	NIL
SM2b		Total available Treatment Capacity	[MLD]	Nil
SM2c		Additional treatment capacity required	[MLD]	3 MLD proposed to be installed in one year to control river pollution. Another 10 MLD Plant with U/G sewerage network proposed in next phase for entire town.
SM3	Adequacy of Sewerage Network			
SM3a		No of ULBs having partial underground sewerage network	[Nos]	NIL
SM3b		No of towns not having sewerage network	[Nos]	1 No.
SM3c		% population covered under sewerage network	[Automatic]	0

4.0 Industrial Wastewater Management Plan

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No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District
IWW1	Inventory of industrial wastewater Generation in District			
IWW1a		No of Industries discharging wastewater	[Nos]	8 Nos
IWW1b		Total Quantity of industrial wastewater generated	[MLD]	0.4 MLD
IWW1c		Quantity of treated IWW discharged into Nalas / Rivers	[MLD]	Nil
IWW1d		Quantity of un-treated or partially treated IWW discharged into lakes	[MLD]	Nil
IWW1e		Prominent Type of Industries	[Agro based] / [Chemical – Dye etc.] / [Metallurgical] / [Pharma] / [Pesticide] / [Power Plants] / [Mining] / [Automobile] : Multiple selection based on size of operation and number	Chemical , Detergent, Ceramic, Sodium Silicate, MS Ingot, Re-Rolling, Cement paints, Mosquito Coils, Spinning Mills, Calicum Carbide, Ferro Alloys, General Engineering, etc.,
IWW1f		Common Effluent Treatment Facilities	[Nos] / [No CETPs]	No CETPs
IWW2	Status of compliance by Industries in treating wastewater			
IWW2a		No of Industries meeting Standards	[Nos]	8 Nos
IWW2b		No of Industries not meeting discharge Standards	[Automatic]	Nil
IWW2c		No of complaints received or number of recurring complaints against industrial pollution in last 3 months	[Nos]	Nil

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AWW4	Status of Action taken for not meeting discharge standards			
IWW4a		No industries closed for exceeding standards in last 3 months	[Nos]	Nil
IWW4b		No of industries where Environmental Compensation was imposed By SPCBs	[Nos]	Nil

5.0 Air Quality Management Plan

No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District
AQ1	Availability of Air Quality Monitoring Network in District			
AQ1a		Manual Air Quality monitoring stations of SPCBs/CPCB	[Nos] / [None]	3 Nos under National Air quality Monitoring Programme funded by CPCB, Delhi.
AQ1c		Automatic monitoring stations Operated by SPCBs/ CPCB	[Nos] / [None]	Proposed
AQ2	Inventory of Air Pollution Sources			
AQ2a		Identification of prominent air polluting sources	[Large Industry] / [Small Industry] / [Unpaved Roads] / [Burning of Waste Stubble] / [Brick Kiln] / [Industrial Estate] / [Others] (Multiple selection)	Industrial activities, Unpaved Roads, Burning of Waste stubble, Vehicle emission, etc.,
AQ2b		No of Non-Attainment Cities	[Nos] / [None]	None
AQ2c		Action Plans for non-attainment cities	[Prepared] / [Not yet prepared]	-
AQ3	Availability of Air Quality Monitoring Data at DMs Office			Available - uploading since April 2021

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AQ3a		Access to air quality data from SPCBs & CPCB through Dashboard	[Available] / [Not yet Available]	Available
AQ4	Control of Industrial Air Pollution			
AQ4a		No of Industries meeting Standards	[Nos]	40 Nos
AQ4b		No of Industries not meeting discharge Standards	[Nos]	40 Nos
AQ5	Control of Non-industrial Air Pollution sources			
AQ5a		Control open burning of Stubble –during winter	[Nos of fire incidents]	Nil
AQ5b		Control Open burning of Waste – Nos of actions Taken	[Nos]	Nil
AQ5c		Control of forest fires	[SOP available] / [No SoP]	Nil
AQ5d		Vehicle pollution check centers	[% ULBs covered]	1 No
AQ5e		Dust Suppression Vehicles	[% ULBs covered]	Nil
AQ6	Development of Air Pollution complaint redressal system			
AQ6a		Mobile App / Online based air pollution complaint redressing system of SPCBs.	[Available] / [Not available]	Available

6.0 Mining Activity Management plan

No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District
MI1a	Inventory of Mining in District			
MI1a		Type of Mining Activity	[Sand Mining] / [Iron Ore] / [Bauxite] / [Coal] / Other [specify] Multiple selection in order of magnitude of operations	Sand Mining
MI1b		No of Mining licenses given in the District	[Nos]	0

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MI1c		Area covered under mining	[Sq Km]	0
MI1d		Area of District	[Sq Km]	157
MI1e		Sand Mining	[Yes] / [No]	No
MI1f		Area of sand Mining	[River bed] / [Estuary] / [Non -river deposit]	0
MI2	Compliance to Environmental Conditions			
MI2a		No of Mining areas meeting Environmental Clearance Conditions	[Nos]	Not applicable
MI2b		No of Mining areas meeting Consent Conditions of SPCBs / PCCs	[Nos]	Not applicable
MI3a	Mining related environmental Complaints			
MI3b		No of pollution related complaints against Mining Operations in last 1 year	[Nos]	0
MI4	Action against non-complying mining activity			
MI4a		No of Mining operations suspended for violations to environmental norms	[Nos]	Not applicable
MI4b		No of directions issued by SPCBs	[Nos]	Not applicable

7.0 Noise Pollution Management Plan

No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District
NP1	Availability Monitoring equipment			
NP1a		No. of noise measuring devices with district administration	[Nos] / [None]	1 No (PPCC) and 1 No with Traffic Police
NP1b		No. of noise measuring devices with SPCBs	[Nos] / [None]	1 No

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NP2	Capability to conduct noise level monitoring by State agency / District authorities			
NP2a		capability to conduct noise level monitoring by State agency / District authorities	[Available] / [Not available]	Available
NP2	Management of Noise related complaints			
NP2a		No of complaints received on noise pollution in last 1 year	[Nos]	Nil
NP2b		No of complaints redressed	[Nos]	Not applicable
NP3	Compliance to ambient noise standards			
NP3a		Implementation of ambient noise standards in residential and silent zones	[Regular Activity] / [Occasional] / [Never]	Regular activity since September 2021
NP3b		Noise monitoring study in district	[carried out] / [not carried out]	Carried out
NP3c		Sign boards in towns and cities in silent zones	[Installed] / [Partial] / [Not Installed]	Under Process