

CUDDALORE DISTRICT

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1. Introduction

i) Geographical location of the district

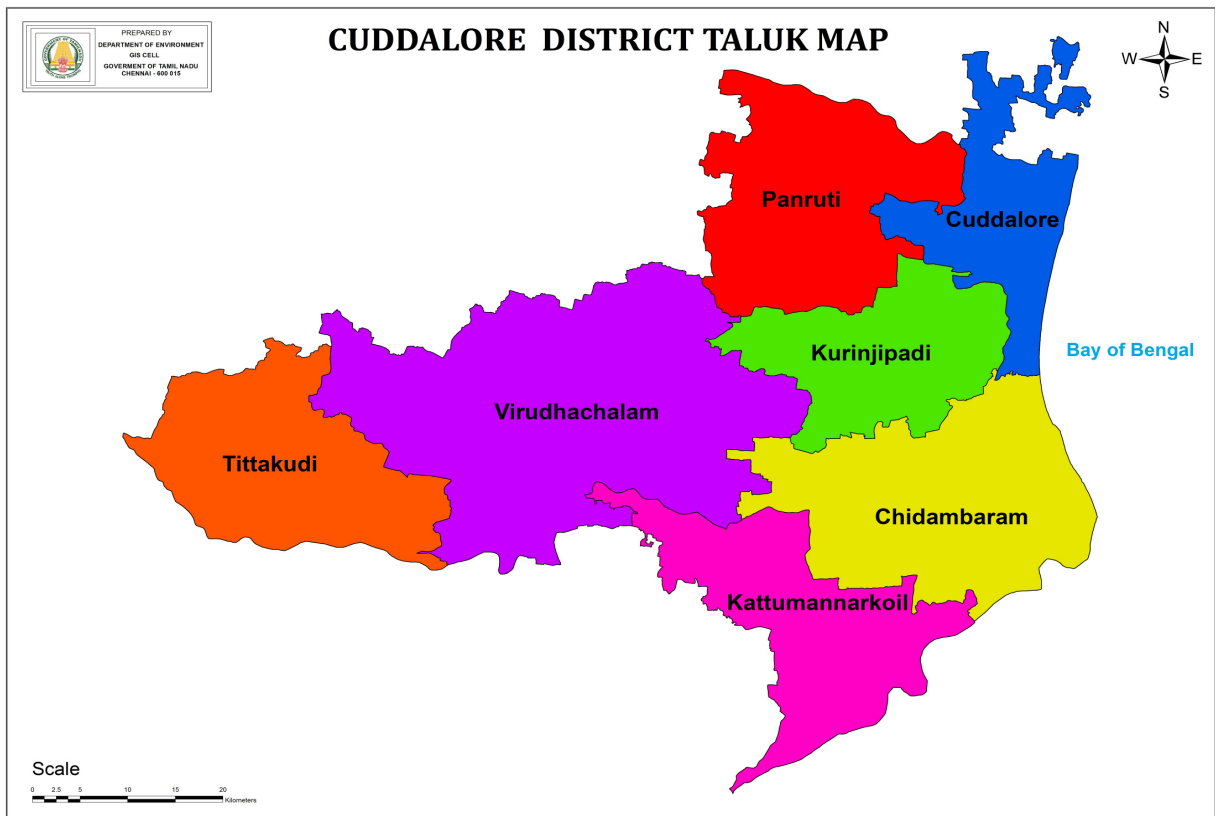
The district of Cuddalore lies on the east coast. It is bounded on the north by Villupuram district, on the south by Nagapattinam district, on the west by Perambalur and Villupuram districts and on the east by Bay of Bengal. Headquarter of this district is Cuddalore. The Southern boundary follows for the greater part of the length the of two rivers - the Vellar and the Coloroon. The district lies between $78^{\circ} 38'$ and 80° East latitude and $5^{\circ} 5'/11^{\circ} 11'$ and $12^{\circ} 35'$ North longitude. The total geographical area of the district is about 3,678 sq.km

ii) Administrative profile (taluks / villages)

The Cuddalore district comprises of 3 revenue divisions, 7 revenue taluks, 32 firka and 896 revenue villages.

iii) Meteorological information

The normal rainfall during the North East monsoon is 716.5 mm and 373.6 mm during South West monsoon while the actual rainfall during North East monsoon was 1346.1 mm and 340.3 mm during South West monsoon during 2007-2008. From the month of August to December, the district receives a rainfall, which is more than the annual average rainfall. This is due to North East and South west monsoons. The average maximum and the average minimum temperatures have been 36.8°C in May and 19.9°C in January,



respectively.

2. Resources availability

i) Land resources

Black soil is the predominant soil type in this district accounting for 45.2 % of the total area under agriculture. Red loam and red sandy soil are the other types of soil prevalent in the district.

ii) Agriculture and horticulture

The most part of the district is a flat plain sloping gently from the west to the sea on the east and also from the north to the south except for a strip of high ground running across the district from Pondicherry to Virudhachalam. The region can be distinguished into the following natural divisions. The eastern region consists of red soil tracts and wide spread paddy fields and green groves of fruit bearing trees marked here and there by broad open tanks. The Southern region of the district, particularly Chidambaram taluk and a few parts of Virudhachalam taluk, is comparatively green and fertile and is made up of even expanse of irrigated land

which resembles to a great extent, the deltaic part of Thanjavur district. This is in contrast to the rest of the composite South Arcot district. The seashore is fringed with a belt of blown sand of varying width. Following tables show the details of agriculture during the year 2005-2006. The fruit crop yield comprising mango, guava, etc., is the highest when compared to the other crops. The main plantation crop is cashew nut.

Agriculture (2005-2006)

a) Total Cultivated area ha.	2,72,159
b) Net area sown ha.	2,19,891
c) Area sown more than once ha.	52,268

Agricultural land holdings (2005-2006)

i) Holdings	2,97,836
ii) Area ha	2,39,279.28
iii) Average size of holdings	0.8

Area and production of Principal Crops (2004-2005)	Area in ha (tonne)	Production in (tonne)
i) Rice	115	316
ii) Millets and other cereals	126	332
iii) Pulses	36	12
iv) Sugarcane (Gur)	30	355
v) Groundnut	21	49
vi) Gingelly	4	1
vii) Cotton(Bales)	2	1,734

Important food crops	Paddy, Groundnut, Sugarcane, Cholam, Cambu, Redgram, Cotton, Gingelly, Tapioca, Greengram, Blackgram, Coriander, Banana, Maize, Varagu, Cashewnut
Important non food crops	Gingelly, Cotton, Groundnut, Coconut

iii) Forest resources

Total forest area of Cuddalore district was 9,718.85 ha Reserve Forest category was 9,467.13 ha and Reserve Lands was 196.52 ha while unclassified forest was 55.20 ha

Out-turn of Forest Product,

- a) Fuel wood (MT): 15.500
- b) Timber (Cu.m) : Teak-13.634 m³
- c) Cashew (MT) : 0.55
- d) Others
 - i) Palmyra leaves : 3,400 Nos.
 - ii) Palmyra Nuts : 5,000 Nos.



iii) Mineral resources

The district has fairly rich mineral deposits. The fossiliferous cretaceous limestone is found in Parur and Northwest of Virudhachalam.

Neyveli Lignite Corporation

Major Mines

Sl.No.	Minerals	Name of the lessees	G.O.No & Date	Taluk Covered	Extent	Period of Lease	out area situated in patta Land/	Status of the lease
1.	Lignite	Neyveli Lignite Corporations Ltd.,	636 Ind.(MMA1) Dept. Dt.3.08.99	Chidambaram, Panruti, Vridhachalam, Cuddalore	259 sq. km	20 years 6.12.96 to 5.12.2016	-	-
2.	Crude Oil and Natural Gas	Tvl Oil and Natural Gas Corporation Ltd.	G.O.Ms.No.439Ind. (M1), dept., dt.15.3.88	Chidambaram, Keelathirukazhi palai	1.sq.km	15.12.1987 to 14.12.07	-	-
3.	Lime Shell	Lakshmi kumar, Chidambaram	G.O.Ms.No.58/MMAI /dept. dt.06.03.97	Chidambaram, Keelathirukazhi palai	8/2 4.61.5 sq.km	27.1.2000 to 26.1.2020	Patta land	Operative

v) Water resources

The principal river of the district is the Pennar or the Ponnaiyar. The river flows across the boundary between Cuddalore and Villupuram taluks and empties itself into the Bay of Bengal about 3 miles north of Cuddalore. The Gadilam River, which rises in eastern part of Tirukkoyilur taluk of adjoining district, flows through Cuddalore taluk. In Cuddalore taluk, Malattar joins it on the right and then it flows into the Bay of Bengal at a point, just north of Cuddalore. The Ponnaiyar and the Gadilam are connected by a river course called the Malattar, which serves to carry the surplus water of the former into the latter.

The Paravanar, also called Uppanar, rises in Virudhachalam taluk. This river flows between Cuddalore and the Chidambaram taluks, steers northwards and falls into the Bay of Bengal by the mouth of Gadilam. The Coleroon, which splits off from Cauvery River in Tiruchy district, is more a river of the Thanjavur district. It flows on the Southern boundary of Chidambaram taluk for 36 miles and joins the Bay of Bengal 6 miles south of Parangipettai.

The junction of the rivers, Vasishtanadi and Swetanadi, which rise in Salem district, forms the Vellar River. The Vasishtanadi enters the then South Arcot district through Attur, passes just south of the Kalrayan and Tiruchirapalli for 16 miles, by are it joins the Swetanadi. The united streams still follow the boundary and the river flows for another 20 miles, gathering the waters of Manimuktanadi,

Gomukhanadi and Mayuratnadi which drain the eastern slopes of the Kalrayan. The river then passes through Chidambaram taluk and joins the Bay of Bengal near parangipettai. There are backwaters on the seacoast caused by the seawater breaking into the watercourse of streams and rivers. One such backwater is found near Cuddalore.

Net Area Irrigated (in ha)-(2005-06)

i. Govt. Canals	: 46,584
ii. Tanks	: 7,104
iii. Tube wells	: 92,451
iv. Other wells	: 8,644
v. Other sources	: 230

vi) Fisheries production

The district has good fishing potential in view of its rich coastal area. The coastal fish production is more than inland fish production and the production has been steadily increasing. The Cuddalore district has a coastal line of 57.5 km. The inland fresh water area spreads for about 8,113 (81.13 sq.km) ha and estuarie and brackish water area over 8,072 (80.72 sq.km) ha Marine fishing is practised in 41 coastal villages of the district. Number of coastal blocks 3; Marine fish production was 18,000 MT and inland fish production was 5,823 MT; Number of fishermen engaged in fishing was 13,769. The fish production has increased in both quantity and value since 1991.



Temple of Lord Nataraja

vii) Heritage sites

Chidambaram is a temple town and the headquarters of Chidambaram taluk. It is famous for the ancient temple of Lord Nataraja. It is one of the largest temples in South India, covering an area of not less than 39 acres. Lord Siva is worshipped here in the form of Akasalingam and is therefore invisible. The temple is noted for its five Sabhas or halls known as Raja Sabha - Deva Sabha, Chita Sabha, Kanaka Sabha and Nritta Sabha. Of these, the Raja Sabha is a thousand-pillared Mandapam, 340 ft by 180 ft. This temple which is differently known in religious literature as Chit Ambalam, Ponnambalam and Tillai Ambalam, is associated with Saint Manikka Vasagar who had the triumph of his life in defeating the Ceylonese Buddhists who attempted to overthrow the worship of Siva. The anniversary of the event is still celebrated. The saint is also said to have attained Nirvana at this place. Saints Tirugnanasambandar, Appar and Sundarar are also worshipped at this temple in December-January. Ani Tirumanjanam in June-July is attended by a large number of people from all over the State. The famous

Saivite temple of Chidambaram is one of the ancient temples of South India renowned for its sculptures of dances in various Natya poses.

Cuddalore is the headquarters of Cuddalore taluk and the Cuddalore district. It can be divided into four parts, viz., Cuddalore Old Town, the commercial quarter on the shore, Cuddalore New Town or Tirupathiripuliyur on the south bank of the Gadilam river, Manjakuppam, the official centre where the public offices are situated, and Fort St. David on the north of the river Gadilam. Cuddalore Old Town is an important river port and a commercial centre. In Tirupathiripuliyur, there is an old Siva temple dedicated to Lord Pataleswarar, which is referred to in the Thevarams. The Brahmotsavam festival in this temple is largely attended by people in this taluk as well as other taluks. Mannargudi is a small town in Chidambaram taluk. It is called Kattumannargudi to distinguish it from Raja Mannargudi in Thanjavur district. The village is reputed as the birthplace of the Vaishnavite saints, Nadamunigal and Alavandar. The local Vaishnavite temple is famous for its sanctity.

Neyveli is a well-known place in Virudhachalam taluk, situated 18 km to the east of Virudhachalam and 43 km to the south west of Cuddalore. Due to the mining of Lignite by the Neyveli Lignite Corporation, this place has now achieved international recognition. Lignite deposits are spread over more than 100 square miles in and around the place. A new township has been established at considerable cost. Thermal power stations and other allied factories have also been established.

Parangipettai is situated on the north bank of Vellar estuary. The Portuguese were the earliest European settlers of the place from whom it passed into the possession of the Dutch. The Dutch finally handed it over to the English in 1824. This town has a large Muslim population engaged mostly in sea-trade. Tombs of several Muslim saints are situated in this place, most important among them being the dargah to Saint Malumiyar, Araikasu Nachiyar, Hafiz Mir Sahib and Sayed Saheb. The Marine Biological research station of Annamalai University is located here.

Virudhachalam, the headquarters of Virudhachalam taluk, is noted for its ancient Siva temple dedicated to Vridhagiriswarar, celebrated in the Thevarams. There are several legends connected with this temple. Masi Magam is an important festival of this place when a large number of pilgrims flock to this place to have bath in the sacred Manimukthar River.

The Lord Nataraja Temple in Chidambaram (Cuddalore Block) and the Boat Club of Pichavaram (Parangipettai Block) are the two main tourist spots in the district, which are visited throughout the year. Tourist arrivals both domestic and foreign have been steadily increasing and estimated at 2, 33,581 during 1997. These two tourist spots are also included in the tourist circuits identified by the Tourism department.

viii) Biodiversity

All the mangrove formations in Tamil Nadu occur along the East coast, at the confluence points of major and minor rivers with the Bay of Bengal. Mangrove of Pichavaram lies between $79^{\circ} 45'$ to $79^{\circ} 50'$ E

longitude and $11^{\circ} 20'$ to $11^{\circ} 30'$ N latitudes at the Northern extremity of the Cauvery delta in the Cuddalore district. It is located between the Vellar in the North and the Coleroon in the South. It communicates with the sea by a shallow passage, which is only opening in the littoral sand.



Pichavaram Mangrove Forests

The mangroves of Pichavaram are distributed in three Reserve Forests with a total area of 1357.72 ha. Excluding the lagoons and waterways, mangrove vegetation occupies an area of 475 ha.

People have arrested the inflow of tidal waters after clearing the mangrove vegetation, and have used the land for farming or construction of buildings. A cattle grazing is the major cause for the destruction of mangroves especially in Pichavaram of Tamil Nadu.

The Pichavaram forest not only offers waterscape and backwater creeks but combine another rare occurrence- the mangrove forest- where trees are permanently rooted in a few feet of water. The pichavaram mangroves are considered among the healthiest mangrove occurrence in the World. Pichavaram consists of a number of islands interspersing a vast expanse of water covered with green trees.

The area is about 2,800 acres and is separated from the sea by a sand bar.

The Pichavaram mangrove biotope, with its peculiar topography and environmental condition, supports the existence of many rare varieties of economically important shell and finfishes.

The Pichavaram mangroves attract an appreciable bird population of residents, local migrants and true migrants. At the mangroves, so far, 177 species of birds belonging to 15 orders and 41 families have been recorded. The season for birds is from September to April every year. Peak population of birds can be seen from November to January. This is due to high productive nature (in terms of prey organisms) of the ecosystem and coincidence of the time of arrival of true migrants from foreign countries and local migrants from their breeding grounds across India. The availability of different habitat types such as channels, creeks, gullies, mud flats and sand flats and adjacent sea shore offers ideal habitat for difference species of birds.

3. Impacts

i) Urbanization

The estimated sewage generation is 216 lakh liters per day among municipalities and 105.74 lakh liters per day among town panchayats.

Cuddalore Municipality is responsible for Solid Waste Management in the town. The management includes collection, transportation and disposal of the solid waste Generated within the municipal limits. generation of waste from households, hospitals, restaurants, markets etc. are dumped in the communal waste storage bins. Subsequently the municipality collects,

transports and dumps the solid waste at dumping yard located at Thirupapuliur, Cuddalore old town & Semmandalam, which are situated at a distance of 3 km / 5 km, 4 km respectively. The current details of solid waste management in town is given below :

1. Waste generation tonne /day : 80
2. Per capita waste generation
grams/day : 505
3. Waste collected in %age : 77
4. Total no. of vehicle available : 11
5. Total vehicle capacity for
collection tonne : 23
6. Total area of disposal site (Acres) : 10.66

Solid wastes are segregated as degradable and non degradable. Primary collection is carried out using tricycles from door at door in wards and segregated to disposal points. As per Government order this Municipality introduced privatization of Solid Waste Management in Thirupapuliur area covering 8 Wards and is going on satisfactorily.

ii) Industrial development

The district has many other special and hazardous industries, which are classified as “Red” by TNPCB. These are mostly chemicals, textiles and pharmaceutical industries. The bifurcation of the district in 1993-94 has resulted in the redistribution of industries based on location. The details on the number of industries are given below.

Industries

A. Industries in the District

1. No. of Working Factories : 228
2. No. of Trade Unions : 57
3. Large Scale Industries : 35
4. Small Scale Industries : 617

5. Cottage Industries : 200
6. Medium Scale Industries : 114

B. Name of the Important Industries in the District

1. Neyveli Lignite Corporation , Neyveli
2. MRK Sugar Mill, Sethiathopu
3. EID Parry (I) Ltd, Nellikuppam
4. Ambiga Sugar Mills, Pennadam
5. TANFAC, Cuddalore O.T
6. Vanavil , Cuddalore O.T
7. National Cotton Mills, Chidambaram
8. SPIC Pharma Chemicals , Cuddalore O.T
9. Asian Paints (I) Limited, Cuddalore O.T
10. Tagros Chemicals (I) LTD.Cuddalore O.T
- 11.Clariant Chemicals LTD., Cuddalore O.T

C. Name of the Industrial Park

1. SIPCOT , Cuddalore O.T
2. SIDCO, Semmandalam, Cuddalore
 - a) Cuddalore
 - b) Vridhahalam
 - c) Vadalur
3. Neyveli Lignite Corporation, Neyveli

The industrial complex in Cuddalore, is operated by SIPCOT. The first phase of this SIPCOT industrial complex covers an area of 200 ha and is planned to house 53 units. The second phase of the development will cover an additional area of 88 ha. The unit produces dyes, organic chemicals, pesticides, aluminium fluoride and other chemicals.

iv) Thermal power generation

Thermal Power Station – I is the first Unit of 600 MW capacity Thermal Power Station – I was synchronised in May 1962 and the last unit in September 1970. This power station consists of six units of 50 MW each and three units of 100 MW each. This power station continuously achieved over

70% power load factor from 1982 – 83 to 1991 – 92 against the national average of around 50%. Thermal Power Station - II is the 1470 MW Thermal Power Station consists of 7 units of 210 MW each.

v) Natural hazards

As any other coastal environment, coast of Cuddalore district also gets affected with regular erosion and accretion. Sea level rise and elevation in sea surface temperature are also seen here as the consequences of global climate change.

v) Natural disaster prone areas

The district is predominantly a flood and cyclone prone district. In 1992-93, three taluks and 9 blocks were affected by flood and in 1993-94 six taluks and 13 blocks were affected by flood. Generally, flood occurrence is more in Kattumanarkudi and Chidambaram taluks.

Moreover, 2004 Indian Ocean tsunami hit this district heavily as severe damages to lives and materials were witnessed and hence coast line is always prone to tsunami.

4. Government initiatives

i) Awareness initiatives

Various awareness creation activities have been made among the fisher folk on Tsunami and Coastal Regulation Zone issues by different Government and Non Government organizations. Attempts have been made to develop bioshields, rebuild livelihoods, establish the 'Village Knowledge Centres' and reclaim soil in the tsunami affected agricultural fields in Cuddalore district.

Though various development activities have been undertaken under various schemes, in all 16 Town Panchayats in Cuddalore District, the Tsunami works have also been under taken by various NGOs. *Tsunami Emergency Assistance Project* (TEAP) and Emergency Tsunami Reconstruction Project (ETRP) schemes are in operation in the following two Town Panchayats and several development activities have also been taken up in the Tsunami affected area apart from livelihood activities.

Economic Activities - SHG (G.O.Ms. No. 781, Dated. 30.12.2005)

Killai & Parangipettai Town panchayats :

Sl. No	Scheme	No. of packages	No. of works	Length of road	Amount in lakh
1	EPA	30	116	21.50	573.78
2	ETRP	10	37	10.00	375.12
Total		40	153	31.50	948.90

Name of the Town Panchayats	Target		Achievement		Subsidy		Loan		Assets Created
	Nos.	Amount in lakh	Nos.	Amount in lakh	Nos.	Amount in lakh	Nos.	Amount in lakh	
Parangipettai	13	36.80	13	36.80	13	18.40	13	18.40	13
Killai	30	78.78	30	78.78	30	39.39	30	39.39	30

Economic Activities (For disabled person)

Name of the Town Panchayats	Target		Achievement		Subsidy		Assets Created
	Nos.	Amount in lakh	Nos.	Amount in lakh	Nos.	Amount in lakh	
Parangipettai	63	6.30	63	6.30	63	6.30	63
Killai	60	6.00	60	6.00	60	6.00	60

Revolving Fund

Sl. No.	Name of the Town Panchayats	No. of SHG	Achievement		Revolving Fund	
			Nos.	Amount lakh	Nos.	Amount lakh
1	Parangipettai	143	85	19.50	85	19.50
2	Killai	235	183	41.90	183	41.90

ii) Bio diversity

In the Pichavaram mangrove wetland of Cuddalore district, wave energy along the coast is high but a sandy beach, located between the mangroves and the sea, protects the mangroves. Mangrove restoration has been done by M.S. Swaminathan Research foundation after the tsunami.

5. Summary / Conclusion

The district of Cuddalore lies on the East Coast bounded on the north by Villupuram district, on the south by Nagapattinam district, on the west by Perambalur and Villupuram districts and on the east by Bay of Bengal. The total geographical area of the district is about 3,678 sq.km

- The Cuddalore district comprises 3 revenue divisions, 7 revenue taluks, 32 firkas and 896 revenue villages.
- Black soil is the predominant soil type in this district accounting for 45.2% of the total area under agriculture. Red loam and red sandy soil are the other types of soil prevalent in the district.
- The most part of the district is a flat plain sloping gently from the west to the sea on the east and also from the north to the south except for a strip of high ground running across the district from Pondicherry to Virudhachalam
- Total forest area of Cuddalore district was 9,718.85 ha reserve forest category was 9,467.13 ha and reserve lands was 196.52 ha while unclasses forest was 55.20 ha
- The district has fairly rich mineral deposits. The fossiliferous cretaceous limestone is found in Parur and Northwest of Virudhachalam.
- The Neyveli Lignite Corporation (NLC): The NLC is in operation since 1956.
- The principal river of the district is the Pennar or the Ponnaiyar. The river flows across the boundary between Cuddalore and Villupuram taluks and empties itself into the Bay of Bengal about 3 miles north of Cuddalore.
- Pichavaram mangrove area lies at the northern extremity of the Cauvery delta.
- The district has other industries, which are classified as “Red” by TNPCB.
- The district is predominantly a flood cyclone prone district.
- Mangrove wetlands provide an important ecological asset and an invaluable economic resource to the coastal communities.
- Mangrove restoration has been done by M.S. Swaminathan Research foundation after the tsunami.