

# THIRUVALLUR DISTRICT

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## 1. Introduction

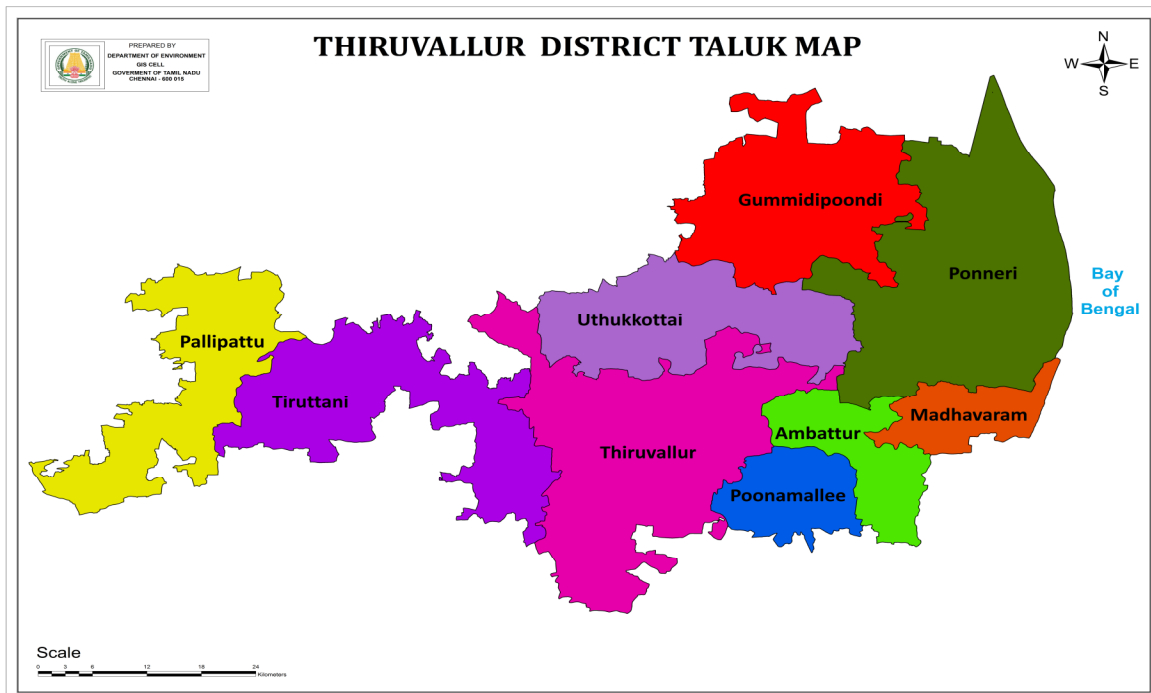
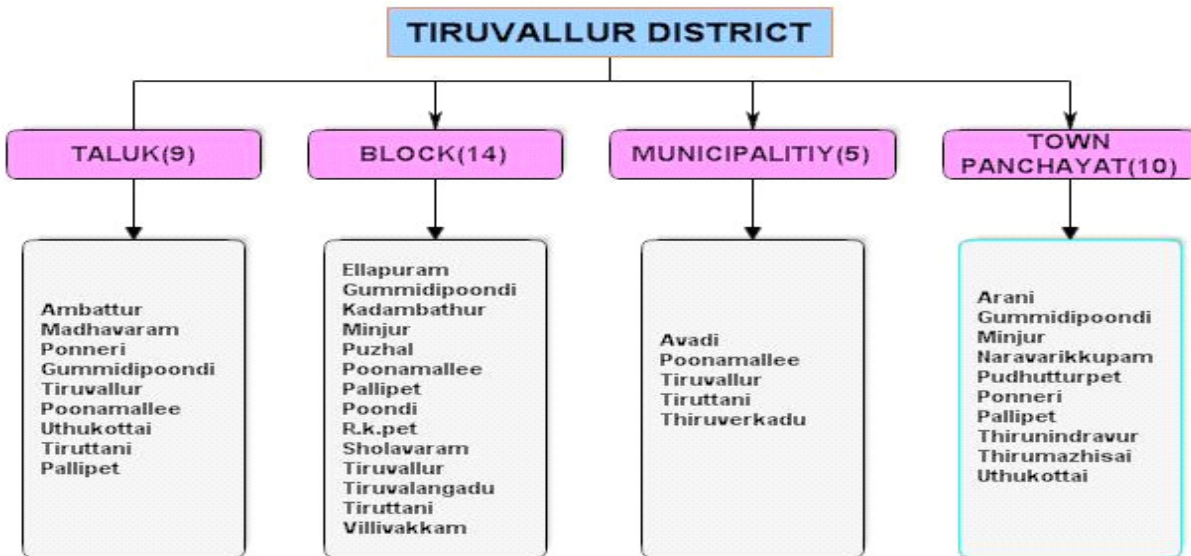
### i) Geographical location of the district

Thiruvallur district, a newly formed district bifurcated from the erstwhile Chengalpattu district (on 1<sup>st</sup> January 1997), is located in the North Eastern part of Tamil Nadu between 12°15' and 13°15' North and 79°15' and 80°20' East. The district is surrounded by Kancheepuram in

the South, Vellore in the West, Bay of Bengal in the East and Andhra Pradesh in the North. The district spreads over an area of about 3422 sq.km

### ii) Administrative profile

The following image shows the administrative profile of the district.



### iii) Meteorological information

The climate of the district is moderate neither too hot nor too cold but humidity is considerable. Both the monsoons occur and in summer heat is considerably mitigated in the coastal areas by sea breeze. The months between April and June are generally very hot with temperature going up to an average of 37.9°C. During the winter (December - January) the average temperature is 18.5° C.

The coastal areas receive more rains than the interior. The average normal rainfall of the district is 1,104 mm. Out of the total, 52% of the rainfall occurs during the northeast monsoon period and 41% during south west monsoon period. The district mainly depends on monsoon rains and faces distress conditions in the event of the failure of monsoons.

## 2. Resource availability

### i) Land resources

The coastal region is mostly flat while certain areas in Tiruttani and Pallipattu taluks are undulated and even hilly. The types of soil, predominantly found are red non calcareous and coastal alluvial. The soil found in the coastal region is of the erinaceous type (sandy), suitable for casuarina plants. The other soil types are sand and sandy loams which are found in all taluks with red loam in part of Tiruthani Taluk. Saline and alkaline soils are also noticed in some patches of Ambathur, Ponneri and Tiruvallur Division.

### ii) Agriculture and horticulture

The main occupation of the district is agriculture and allied activities. Nearly 47% of the total work force is engaged in the agricultural sector. Around 86% of the total

population is in rural areas engaged in agriculture and allied activities. The major crops grown in the district are rice, cumbu - ragi, green gram, black gram, sugar cane and groundnut. Apart from this, certain horticultural crops like mango, guava and vegetables have also been cultivated successfully.

Total cultivated Area (ha)	:	184198
Net Area Sown (ha)	:	136648
Area Sown more than once (ha)	:	50550

Cropping Intensity	:	134.8%
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### Details of Crops Cultivated

#### Paddy

Paddy is the principal crop extensively cultivated during three season Sornavari (April to July), Samba (August to November) and Navarai (December to March). Normal area under paddy is 82,869 ha. and normal productivity of rice per ha. is 3359 kgs.

#### Millets

The normal area under millets is 1578 ha Among millets, cumbu is the major millet crop generally sown under rainfed condition in a normal area of 1,220 ha. The normal productivity under millet is 2,049 kg/ha.

#### Pulses

The normal area under pulses is 8,611 ha under Kharif and Rabi seasons and larger area of pulses is cultivated during Rabi season. The normal productivity of pulses is 549 kg/ha. The predominant pulses crop cultivated are greengram, blackgram and redgram.

## Oilseeds

Groundnut is the major oilseed cultivated in a normal area of 17,401 ha under Kharif and Rabi seasons. More area is cultivated during Rabi Season. The Normal productivity is 4,274 kg/ha.

## Sugarcane

Sugarcane is cultivated in a total area of 5,848 ha with normal cane productivity of 117 MT/ha.

### iii) Forest resources

Forests occupy 5.8% of the total area. The total extent of Reserved Forests and Reserve lands are 19,791 ha. About 1,800 ha of Reserve Lands, notified under section 26 of Tamil Nadu Forest Act is also under active consideration for declaration as Reserve Forest. These Lands are in bits and pieces spread over the district. The total number of blocks is 108. The forest types available in the district are tropical in nature and they fall under dry thorn and dry evergreen types. Much of the natural forests have been converted into man-made forests since the late 1950s. However, chunks of natural forests still exist.

### iv) Mineral Resources in Thiruvallur District

#### Minor Minerals

Lime Shell : Pulicat Lake,  
Sunnambukulam,  
Annamalaicherry

Silica Sand : Elavoor, Eravanoor,  
Ennore,  
Gummidipoondi and  
Ponneri Taluks

Stoneware Clay : Adhigathur, Odhapai,  
Gudapakkam Kandigai

## Major Minerals

River Sand : Kosasthalaiyar, Araniar  
Kallar, Nandi, Coovum

Blue Metal : Pallipattu and Tiruttani Taluks

Gravel : Ponneri and Gummidipoondi  
Taluks

Brick Clay : Thiruvallur and Ponneri Taluk

### v) Water Resources

Apart from seasonal rivers like Kosasthalaiyar, Araniar, Nandi, Kallar, Coovum and Buckingham Canal there is no perennial river in the district. Since these seasonal rivers are not sufficient, irrigation through tanks, tube wells and open wells are very common.

### vi) Fisheries production

The total coastal area of the district is about 49,803 ha and has a coast line of 80 km for marine fisheries. Prawn/shrimp culture is famous along the coast line of Gummidipoondi and Minjur. The total marine fish production is to the tune of 7,937 tonnes and inland fish production 14,816 tonnes during 2009-10. The inland fresh water area spreads over 75,006 ha and estuaries and brackish water area are 14,841 ha.

Marine fishing is practised in 39 fishing villages of the district. Marine and inland production has increased both in quality and value. A comparison of fish production indicates that the coastal fish production is slightly higher than the inland fish production during 2009-10.

## vii) Heritage sites

### **Lord Arulmigu Subramaniya Swami Temple, Tiruttani**

The beautiful temple of Lord Muruga at Tiruttani crowns a single rock 700 ft above sea level. It is situated amidst a range of hills with a panoramic view. This sacred place is situated in the Chennai-Mumbai highway 13 km from Arakkonam and 84 km from Chennai. Around this town are famous religious places such as Kancheepuram (Banares of the South) on the South, Sholingar and Vallimalai on the West, the popular and renowned pilgrimage centre, Tirupati and Kalahasti on the North and Tiruvalangadu with Lord Nataraja on the East.



### **Lord Arulmigu Subramaniya Swami Temple, Tiruttani**

### **Bhavani Amman Temple, Periyapalayam**

Bhavani Amman Temple in Periyapalayam near Chennai attracts many devotees. Bhavani Amman is the main deity of the temple, and people throng in thousands on weekends and in the month of Aadi and Avani. Located at about 45 km from Chennai at Chennai-Kolkata highway near Red Hills people can reach Periyapalayam easily. The Temple is busy throughout the year and people visit the

temple with their families and seek the blessings of Bhavani Amman. Especially on the weekends people visit here in groups and have a divine get-together here.

### **Vadivudaiamman Thygarajaswami Temple, Thiruvottriyur**

Thiruvottriyur nestled in this part of the city is the place of importance during the month of Aadi as Vadivudaiamman Thygarajaswami temple is located here.

### **Sri Viswaroopa Panchamukha Anjaneyaswami Temple**

The Mahapradishtai of 32 ft tall Sri Viswaroopa Panchmukha Anjaneyaswami at Periakuppam Village at Tiruvallur (45 km from Chennai, enroute to Tirupathi) was performed on the 6<sup>th</sup> June, 2004 with the blessings of Gurudev Poojyasri "Mantramurthy Dasan" S.Venkatesa Bhattachariar Swamigal.

This happened to be a unique event for the entire humanity. The uniqueness is due to the fact that this is the one and only Pradishttai in the entire world under the mantra shastra.

## viii) Biodiversity

Tiruvallur coast has a very vast coastal plain, which extends from North of Toppala Palayam to South of Sattangadu. There are three strand lines, with intervening broad tidal flats occurring in the coastal plains. Lagoons, mangrove swamps, salt marshes, estuaries, creeks, sand dunes, and beach terraces represent the marine landforms. The Pulicat brackish water lake of Bay of Bengal in Ponneri block is a potential hot spot along the coast. It was the site of old Dutch settlement. Migratory birds from various countries flock here every year between December and February. Pulicat Lake was identified as a site of international importance by the International Union for

the Conservation of Nature (IUCN) and are rich in mangroves.



**Pulicat brackish water lake**

### **3. Impacts**

#### **i) Urbanization**

The proportion of urban population to total population has shown fluctuations over the decades in the district. The estimated sewage generation is at 284.67 Million Litres per Day (MLD) in urban centres with a break up of 202.42 MLD for municipalities and 82.25 MLD for town panchayats. Underground drainage systems are available only in Tiruvottriyur municipality and Tiruverkadu and Maduravayal town panchayats. Overall solid waste generated in the district adds up to 422.6 tonnes with a break-up of 366 tonnes in municipalities and 56.6 tonnes in town panchayats. The solid waste generation is highest in Ambattur among municipalities and in Porur among town panchayats. The overall collection efficiency is 88 % with of 344 persons engaged in solid waste management. The primary component of the waste is compostable matter constituting 90% in the total waste.

#### **ii) Industrial development**

Thiruvallur district is one of the fastest developing districts in Tamil Nadu in

terms of Industrial Development. The district has many leading industries like Madras Refineries, Madras Fertilizers, Manali Petro Chemicals, MRF, Ashok Leyland, TI Cycles, Britannia India Ltd, Parry India Ltd and Hindustan Motors. It also boasts of the Ennore Thermal Power Station and the Avadi Tank Factory. The district has 16 Industrial Estates, all in operation: 11 developed by the Government and 5 by Private Organisations. There are a total of 1926 industrial units in Thiruvallur district. These units are further classified into Red, Orange, and Green on the basis of their intensity of pollution. For the disposal of hazardous solid wastes, the TNPCB has identified a site at Manalur in Tiruvallur district. Rapid environmental impact assessment study has been conducted for the site. There is a common effluent treatment plant for tanneries at Madhavaram.

#### **Government**

- Ambattur Industrial Estate, Ambattur.
- Electrical Industrial Estate, Kakalur.
- SIDCO Industrial Estate, Chennai-98.
- Industrial Estate, Madhavaram.
- SIDCO Industrial Estate, Kakalur
- Petrochemical Industrial Estate, Vichoor
- SIDCO Industrial Estate, R.K. Pet
- SIDCO Industrial Estate, Gummidipoondi
- Industrial Estate, Mugappair

#### **Private**

- G.K. Industrial Estate, Porur
- M.M.Industrial Estate, Alapakkam
- Moccaram Industries, Velappan Chavadi
- Nagappa Industrial Estate, Puzhal
- Ekambara Naicker Industrial Estate, Alapakkam



This district has 16,940 small scale Industries, notable among them being food, wood, textile, chemical, engineering, non - metallic and leather industries.

**iv) Natural hazards**

The coastline is mainly accreting with noticeable erosional effects particularly near Ennore. Development of offshore bars and shoals are observed near Ennore and Pulicat. Madras Thermal Power Station (MTPS) has been located near the Pulicat Lake. Boulders and Groynes were laid along a continuous stretch in this area. The strip of land between the Bay of Bengal and Pulicat Lake faces sea erosion.

**v) Natural disaster prone areas**

Generally floods occur during north east monsoon when there is heavy rainfall coupled with cyclonic storm in Bay of Bengal. Floods often occur in the basins of Kosasthalaiyar, Araniar, Coovum and Adyar and its tributaries. The entire coastal length of the district is prone to tsunami.

**4. Government initiatives**

**i) Initiatives to improve fisher folk livelihood**

The seed production and target achievement fixed for the Inspector of Fisheries at Poondi for the period 2008-09 & 2009-10 are as follows.

**Table. SEED PRODUCTION AND TARGET ACHIEVEMENT**

Station	2008-09		2009-10		Revenue
	Target ( tonnes)	Achievement ( tonnes)	Target (tonnes)	Achievement ( tonnes)	
<b>Poondi</b>					
Breeding Seed Production	125.00	95.7	-	2.00	
Seed rearing	11.00	11.74			
Late Fry			--	1.100	
Fingerlings			1.44	2.178	
Early Fry			6.55	9.62	
<b>Sathya Moorthi Sagar Reservoir</b>					
Seed Stocking	5.00	2.97	19.58	9.62	
<b>Department Fishing (in tonnes)</b>					
Stocked	7.40	0.185	--	0.037	
Unstocked	7.00	0.0555	--	0.003	
<b>Licence Fishing</b>					
Stocked	100.00	131.648	--	167.799	
Unstocked	330.00	232.330	--	335.599	
Licence issued	3672		2826		

## Fishermen Co-Operative Societies

No of FCS (Men) / Total No. of members 20 / 1953

No of FCS (Women) / Total No. of members 1 / 90

Total No. of FCS / Total No. of Members 21/2043

### Free Housing Scheme

SI. No.	Name of the Society	2005-2006		2006-2007	
		No. of Houses Allotment	Construction completed	No. of Houses Allotment	Construction completed
1.	Sri.Lakshmi Amman	50	32	20	11
2.	Kuppammal Chathiram	05	04	24	23
3.	Athupakkam	15	12	10	06
4.	Pattarai Perumbudur	02	-	-	-
5.	Kannimma Pettai	-	-	15	11
6.	Kaivandoor	-	-	08	04
7.	Athur	-	-	09	01
8.	Krishnapuram	-	-	11	09
9.	Arumbakkam	-	-	03	03
<b>Total</b>		<b>72</b>	<b>48</b>	<b>100</b>	<b>68</b>

### Fishermen Welfare Board (FCS)

Society Members in Welfare Board			Non- Members in FMWB			Marriage	Education	Natural Death	Accident Death	Total
Men	Women	Total	Men	Women	Total					
1085	279	1364	336	330	666	16	13	6	2	37
						Rs. 60000	Rs. 21250	Rs. 60000	Rs. 200000	Rs. 341250

### Pro-water bodies

As per G.O. Ms. No.332 Animal Husbandry, Dairy and Fisheries Dated: 17.11.1993, the Inland fishermen Co-operative societies have taken 5 years lease of fishing over total water spread area of 1207.91 ha.

### Fisheries Development Mission Programme and Fish Farmers Development Agency

As per GO.Ms No.27, the Animal Husbandry Dairy and Fisheries Government



has given a subsidy @ of Rs.1,875/- per ha to the fresh water / prawn farmers.

No of Beneficiaries -- 19  
Total No of Water spread Area -- 97.95 ha  
Subsidy released Rs.1, 31,587/-

Suitable fish farmers were selected and subsidy was released to encourage & enhance the fish production.

The details are as follows.

Sl. No.	Particulars	2007 - 2008
1	Water Spread area ha	29.80
2	Subsidy released Rs.	6,85,962/-

#### Coastal Aquaculture Authority (CAA)

All the Existing shrimp farms must register their farms in the Coastal Aquaculture Authority as per the CAA Act 2005.

The details of applications received and processed are as follows.

1	No. of Applications Received	72
2	No. of Registration Issued	53
3	Farms to be Inspected	-
4	Total No. of Shrimp farms	113
5	Farms in Patta land	96
6	Farms in Govt. Poramboke land	37

#### BFDA (Fish Farmers Development Agency ) Subsidy Details

Sl. No.	Particulars	2007 - 2008	2008 - 2009	2009 - 2010
1	No. of Beneficiaries	2	7	2
2	Subsidy amount released (Rs.)	101200	268800	83200
3	Total water spread area (ha)	2.53	6.72	2.08

#### A.G.A.M.T(Anaithu Grama Anna Marumalarchi Thittam)

During the period 2008-2009 in Tiruvallur District, 13 Blocks were identified. Out of the 52 tanks selected, only 33 tanks for stocking was major carp (1,40,900 Nos.) Similarly during 2009-10 only 8 blocks were selected and the AGAMT work is in progress.

#### S.G.S.Y. (Swaranajayanti Grama Swarozgar Yojana) Training Programme

A Training Programme was implemented to the tsunami affected coastal villages in Tiruvallur. The details are as follows:

Sl. No.	Training Component	No. of Beneficiaries
1	Value added programme	375
2	Seaweed culture	249
3	Engine repair and net mending	1716
4	Crab fattening	10
5	Solar drying	25

#### National Fisheries Development Board (NFDB)

Under this newly implemented scheme, fund was provided to renovate the existing prawn/ fish farm or to construct a new farms for fish and fishery development at Tiruvallur district. For the period 2008-09, eight applications were received and recommended to NFDB.

A three days training programme was also conducted under this scheme titled "Reservoir Fishery Management"

## National Agricultural Development Programme (NADP)

The Fisheries staff training institute, Chennai has been conducting various training programme including ornamental fish culture. Under this scheme the beneficiaries belonging to Tiruvallur district who are actively involved in fish culture / capture were identified and selected by this office. During 2008-09, 30 FFDA farmers were trained under the NADP programme.

### Fish Culture in Floating Net Cages

The Inland Fisherman Co-operative Society members were selected and trained

under NFDB programme for fish culture in floating net cages. The fishermen belong to Sadhurangapettai near Poondi. They were selected for this project for upgradation of their livelihood.

## IAMWARM (Irrigated Agriculture Modernization and Water Bodies Restoration and Management)

The Kosasthalaiyar and Araniar sub basins were selected for IAMWARM scheme under which the fishery activities covered were construction of farms ponds, fish ponds, seed rearing in cages, ornamental fish culture, provided fishing equipments and kiosks for hygienic fish marketing.

### Araniar Sub Basin

Sl. No.	Components	2009-10	2010-11
		Phy. (ha)	Phy. (ha)
1	Aquaculture in irrigation tank	80	220
2	Fish seed rearing in cages	5	-
3	Farm Ponds	10	10
4	Ornamental fish culture	1	3
5	Fish Kiosk	1	-

### Kosasthalaiyar, Sub basin

Sl. No.	Components	2009 - 2010	2010 - 2011
		Phy. (ha)	Phy. (ha)
1	Aquaculture in Irrigation tanks Establishing Fish Seed Bank	1	1
2	Aquaculture in farm ponds	15	-
3	Fish Kiosks	1	-
4	Fishing Implements	20	-
5	Ornamental fish culture	1	3

## **ii) Coastal protection initiatives**

### **Kaatupallikuppam**

This village is situated north of Ennore Port and south of Pulicat Lake. During tsunami, water wall of height 3 m has penetrated about 300 m into the coast. As the Ennore port breakwaters are intercepting the northerly littoral drift, there is slight erosion at this village. Hence, soft measures like plantations and sand nourishment (dredged soil from Ennore port) are recommended.

### **Ennore Creek**

The river Kosasthalaiyar discharges into the Bay of Bengal at Ennore. The Ennore port is located on the northern part of this river mouth. The breakwaters of Ennore port are acting as permanent littoral barriers and hence trapping the sediments into the river mouth. These trapped sediments have choked the river mouth. However, during the tsunami, the mouth of this river was opened due to the penetration of water from the ocean. The dredged spoil is being disposed south of the mouth of the Ennore creek, which was found resettling into the mouth.

In order to have better solution two groynes one on each side of the mouth as training walls may be constructed. The Southern groynes can extend up to a water depth of about 5 m, whereas, the Northern groynes can extend up to a water depth of 4 m. The approximate lengths of the two groynes could be about 250 m and 200 m. In addition, a sand trap on the south of the Southern groynes may be proposed.

### **Ennore to Royapuram**

#### **(Ennore to Ernavoor Kuppam)**

The stretch of about 15 km from Ennore towards its south upto Royapuram

comprises of a number of fishing hamlets. Most of the beaches have been protected by a seawall and combination of seawall and groynes. The beach from Chinna Kuppam (about 3 km from South of Ennore creek mouth) to Ennore mouth has been protected by a seawall. Hence, this should be strengthened by a groynes field, by which additional beach width can be gained, thereby not only stabilizing the seawall but also to win additional beach. The additional benefit will be the reduction of sand entering the Ennore river mouth and also the maintenance dredging being carried out by the Ennore port. The number of groynes for this stretch of 3 km will be about 10, wherein, the average length of the groynes will be 150 m.

## **iii) Awareness initiatives**

Various awareness creation activities have been made among the fisher folk about tsunami and CRZ issues by different Government and Non Government organizations. Attempts have been made to develop bioshields, rebuild livelihoods, and reclaim soil in the tsunami affected agricultural fields in Thiruvallur district.

## **5. Summary / Conclusion**

- Thiruvallur district is situated on the North Eastern part of Tamil Nadu and is surrounded by Kancheepuram district in the South, Vellore district in the West, Bay of Bengal in the East and Andhra Pradesh State in the North.
- The district spreads over an area of about 3,422 sq.km
- This district comprises 9 taluks, 14 blocks, 5 municipalities and 10 town panchayats.

- The Coastal region is mostly flat while certain areas in Tiruttani and Pallipattu taluks are undulated and even hilly.
  - The types of soil predominantly found are red noncalcareous and coastal alluvial.
  - The main occupation of people in this district is agriculture and allied activities. Nearly 47% of the total work force is engaged during the agricultural sector.
  - Paddy is the principal crop extensively cultivated in three – seasons viz sornavari (April to July), Samba (August to November) and Navarai (December to March)
  - Thiruvallur district is one of the fastest developing districts in Tamil Nadu in terms of Industrial Development.
  - Pulicat Lake was identified as a site of International importance by the International Union for the
  - Forests occupy 5.8% of the total area. The total extent of Reserved Forests and Reserve Lands is 19,791 ha.
  - The district does not contain any precious mineral. However it has few varieties of major and minor minerals.
  - Apart from seasonal rivers like Kesathaliar, Aravar, Nandi, Kallar, Coovum and Buckingham Canal there is no perennial river in the district.
  - The total coastal area of the district is about 49,803 ha and has a coast line of 80 km.
- Conservation of Nature (IUCN) rich in mangroves .
- The coastline is protected by the bioshields, sea wall, groynes etc. where ever required lohich helps in sand nourishment and forming additional sea beach.