

## TAMIL NADU ECONOMY

### UNIT- I – TAMIL NADU ECONOMY AT GLANCE:

State domestic Product – Per Capita Income – Geographical Features – Demographic Features.

#### INTRODUCTION:

Tamil Nadu is a state in southern India. Its capital and largest city is Chennai. Tamil Nadu lies in the southernmost part of the Indian subcontinent and is bordered by the union territory of Puducherry and the South Indian states of Kerala, Karnataka, and Andhra Pradesh. It is bounded by the Eastern Ghats on the north, by the Nilgiri Mountains, the Meghamalai Hills, and Kerala on the west, by the Bay of Bengal in the east, by the Gulf of Mannar and the Palk Strait on the southeast, and by the Indian Ocean on the south. The state shares a maritime border with the nation of Sri Lanka.

The region was ruled by several empires, including the three great empires – Chera, Chola and Pandyan empires, which shape the region's cuisine, culture, and architecture.

Tamil Nadu is the tenth largest Indian state by area and the sixth largest by population. The economy of Tamil Nadu is the second-largest state economy in India with ₹18.45 trillion (US\$260 billion) in gross domestic product with a per capita GDP of ₹218,000 (US\$3,100). It ranks 11th among all Indian states in human development index. Tamil Nadu is the most urbanised state in India, and one of the most industrialised states; the manufacturing sector accounts for more than one-third of the state's GDP. Its official language is Tamil, which is one of the longest-surviving classical languages in the world.

Tamil Nadu is geographically eleventh largest and population wise third largest. Tamil Nadu fares well with many achievements. It stands to second in terms of contribution to GDP, third highest in terms of per capita income, investment, Foreign Direct Investment and industrial output. It has been ranked as the most economically free state by the Economic Freedom.

In the social and health sector also Tamil Nadu's performance is better than many other states and better than national average in terms of health, higher education, IMR and MMR.

### **Highlights of Tamil Nadu:**

- ✚ Growth of SGDP in Tamil Nadu has been among the fastest in India since 2005.
- ✚ Poverty reduction in Tamil Nadu has been faster than that in many other States.
- ✚ Tamil Nadu contains a smaller proportion of India's poor population.
- ✚ Tamil Nadu is the second largest contributor to India's GDP.
- ✚ Tamil Nadu ranks 3rd in Human Development Index (source: UNDP- 2015).
- ✚ Tamil Nadu ranks 3rd in terms of invested capital (Rs.2.92 lakh crore) and value of total industrial output (Rs.6.19 lakh crore).
- ✚ Tamil Nadu ranks first among the states in terms of number of factories with 17% share and industrial workers (16% share) of the country.
- ✚ Tamil Nadu is placed third in health index as per the NITI AAYOG report.
- ✚ Tamil Nadu has a highest Gross Enrolment Ratio in higher education.
- ✚ Tamil Nadu has the largest number of engineering colleges
- ✚ Tamil Nadu has emerged as a major hub for renewable energy.
- ✚ Tamil Nadu has highest credit Deposit Ratio in commercial and Cooperative banks.
- ✚ It has highest ranks first on investment proposals filed by MSMEs.

### **Performance of the Tamil Nadu Economy:**

Tamil Nadu has the second-largest economy in India. It is the most industrialised state in India. Over 60% of the state is urbanized, accounting for 10.6% of the urban population in the country, while only comprising 6% of India's total population. Services contribute to 45% of the economic activity in the state, followed by manufacturing at 34% and agriculture at 21%. Government is the major investor in the state, with 52% of total investments, followed by private Indian investors at 29.9% and foreign private investors at 14.9%. It has been ranked as the first most

economically free state in India by the Economic Freedom Rankings for the States of India. In recent years, Tamil Nadu's performance is outstanding and far ahead of all other states in the spheres of health, higher education, growth of MSMEs, poverty alleviation and employment generation.

### **State Domestic Product:**

State Domestic Product, or GDP, is the total value of goods and services produced during any financial year within the geographical boundaries of a state. Also called the state income, GDP is always calculated or estimated in monetary terms, and is instrumental in the evaluation of per capita income. The following chart shows the trend of gross state domestic product of Tamil Nadu at market prices estimated in Indian rupees.

<b>Year</b>	<b>Gross state domestic product</b>
1960	₹1,112 crore (US\$160 million)
1970	₹2,371 crore (US\$330 million)
1980	₹8,081 crore (US\$1.1 billion)
1990	₹31,339 crore (US\$4.4 billion)
2000	₹146,796 crore (US\$21 billion)
2010	₹584,896 crore (US\$82 billion)
2020	₹20.54 lakh crore (US\$290 billion)

Tamil Nadu is the second largest economy in India with a GSDP of \$ 207.8 billion in 2016-17 according to the Directorate of Economics and Statistics, Tamil Nadu. The GSDP of Tamil Nadu is equal to the GDP of Kuwait on nominal term and GDP of UAE on PPP terms.

The GSDP of Tamil Nadu is far higher compared to many countries as shown below. This is mainly due to population effect. Per capita GSDP would be better for inter-country or interstate comparisons. Tamil Nadu may go below if per capita GSDP is considered for comparison:

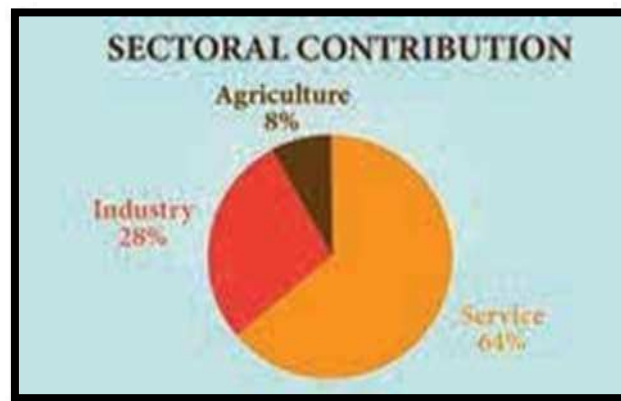
## Gross State Domestic Product

State / Country	GSDP /GDP (Billion)
Tamil Nadu-GSDP	\$ 207.8
Iraq-GDP	\$ 171
New Zealand-GDP	\$ 184
Sri Lanka-GDP	\$ 81

(Source: IMF Outlook, April 2017)

### Sectoral Contribution:

The tertiary sector (service sector) is the major contributor to Tamil Nadu's GSDP at 63.70%. The secondary sector (Industry) contribution is gradually on the rise and now it is 28.5%. Agriculture occupies a prominent position in occupation but its contribution to GSDP is declining and now it is just 7.76%. This means that the tertiary and secondary sectors have grown faster; the agricultural sector has grown slow. Agriculture sector provides employment and food to larger proportion of Indians and Tamils. But, the same sector is growing slowly means it is not good. With this trend sustainable development may not be possible.



### Per Capita Income:

The Per capita GSDP of Tamil Nadu also (\$ 2,200) which is higher than that of many other States in India. Per capita GSDP of Tamil Nadu is nearly 1.75 times higher than the national average, as per 2018 data. In term of ₹ the per capita income

in Tamil Nadu was ₹ 1,03,600 in 2010-11 and it has increased to ₹1,88,492 in 2017-18 as per the Budget figures 2018.

### Per capita income

State / Country	Per capita Income (in USD)
Tamil Nadu	2200
India	1670
Nigeria	2175
Nicaragua	2151
Pakistan	1443
Bangladesh	1358
Zimbabwe	1029
Nepal	729

(Source: World Bank National Accounts data, and OECD National Accounts data files.)

The Per capita income of Tamil Nadu among the southern States is given below:

### Per capita Income (2015-16)

State	PI (₹)
Tamil Nadu	1,57,116
Kerala	1,55,516
Karnataka	1,46,416
Telangana	1,58,360
Andhra Pradesh	1,37,000

(Source: Reserve Bank of India, New Delhi. February 2017.)

### Geographical Features:

Tamil Nadu, state of India, located in the extreme south of the subcontinent. It is bounded by the Indian Ocean to the east and south and by the states of Kerala to the west, Karnataka (formerly Mysore) to the northwest, and Andhra Pradesh to the north. Enclosed by Tamil Nadu along the north-central coast are the enclaves of Puducherry

and Karaikal, both of which are part of Puducherry union territory. The capital is Chennai (Madras), on the coast in the northeastern portion of the state.

### **Location and Size:**

- ✚ Tamil Nadu is one of the 28 states of India, located in the southernmost part of the country. This landmass extends from 8°4'N to 13°35'N latitudes and from 76°18'E to 80°20'E longitudes.
- ✚ Its eastern and western extremities are defined by the Point Calimere and the hills of Anaimalai respectively.
- ✚ The northern extremity of the state is marked by Pulicat lake and the southernmost point is Cape Comorin. It covers an area of 1,30,058 sq.km and is the 11th largest state in India. It covers 4% of the area of our country.

### **Boundaries and Neighbours:**

- ✚ Tamil Nadu is bounded by Bay of Bengal in the east, Kerala in the west, Andhra Pradesh in the north, Karnataka in the northwest and Indian Ocean in the south.
- ✚ Gulf of Mannar and Palk Strait separate Tamil Nadu from the Island of Sri Lanka, which lies to the southeast of India.
- ✚ The state has 1,076 km long coastline, the second-longest in India after Gujarat.

### **Administrative Divisions:**

- ✚ Already we have learnt that the state of Tamil Nadu had only 13 districts at the time of its formation.
- ✚ After that, the state was reorganised several times for the purpose of administrative convenience.
- ✚ At present there are 38 districts in Tamil Nadu, including the newly created districts such as Kallakurichi, Tenkasi and Chengalpet. The administrative divisions of the state.

- ✚ The topography of the state slopes towards east. Based on the major differences in relief, Tamil Nadu is divided into the physical divisions of Western Ghats, Eastern Ghats, Plateaus, Coastal and Inland plains.

### **Western Ghats:**

- ✚ Western Ghats extends from the Niligris in the north to Marunthuvazh Malai at Swamithope in Kanyakumari district in the south.
- ✚ Height of the Western Ghats ranges from 2,000 to 3,000 metres. It covers an area of 2,500 sq.km.
- ✚ Though the Western Ghats is a continuous range, it has some passes. The passes are Palghat, Shencottah, Aralvaimozhi, and Achankoil.
- ✚ The Niligris, Anaimalai, Palani hills, Cardamom hills, Varusanadu, Andipatti and Agasthiyar hills are the major hills of Western Ghats .

### **Nilgiri Hills:**

- ✚ The Nilgiri hill is located in the North-western part of Tamil Nadu. It consists of 24 peaks with more than 2,000 metres height. Doddabetta is the highest peak (2,637 metres) of this hills followed by Mukkuruthi (2,554 metres).
- ✚ Ooty and Coonoor are the major hill stations located on this hills. It has more than 2,700 species of flowering plants and the state animal Nilgiri Tahr is found in this hill.
- ✚ Much of the Nilgiris natural montane grasslands and shrublands have been disturbed or destroyed by extensive tea plantations and cattle grazing.

### **Anaimalai:**

- ✚ Anaimalai is located in the border of Tamil Nadu and Kerala. It is located to the south of Palghat Gap.
- ✚ Anaimalai Tiger Reserve, Aliyar Reserved Forest, Valparai hill station, Kadamparai hydroelectric Power Plant are located on this hills.
- ✚ Aliyar and Tirumurthy dams are located at the foothills of this range.

### **Palani Hills:**

- ✚ Palani hills are the eastward extension of the Western Ghats. Except its western part, these hills are located in Dindigul district. Vandaravu (2,533 metres) is the highest peak in the Palani hills.
- ✚ Vembadi Shola (2,505 metres) is its second highest peak. The hill station of Kodaikanal (2,150 metres) lies in the south central portion of the range.

### **Cardamom Hills:**

- ✚ These hills are also known as Yela Mala hills located in the southwestern part of Tamil Nadu. It acquires its name from the cardamom spice, which is commonly grown here.
- ✚ Pepper and coffee are the other crops cultivated over the hills. They meet the Anaimalai hills in the northwest, the Palani hills in the northeast and Varusanadu and Andipatti hills in the southeast.

### **Varusanadu and Andipatti Hills:**

- ✚ Another eastward extension of Western Ghats is Varusanadu and Andipatti hills. Megamalai (the highway mountain), Kalugumalai, Kurangani hill station, and Suruli and Kumbakarai waterfalls are found on these hills.
- ✚ Srivilliputhur Grizzled Squirrel Wild life Sanctuary is located in the southern slope of these hills in Virudhunagar district. Vaigai river and its tributaries originate in this region.

### **Pothigai Hills:**

- ✚ Its major part lies in Tirunelveli district with its southern slope in the Kanyakumari district. Pothigai hills are called with different names such as the Shiva Jothi Parvath, Agasthiyar hills and Southern Kailash.
- ✚ These hills feature richest biodiversity in the Western Ghats. This area is known for its rich evergreen forest, waterfalls and ancient temples. Kalakkad Mundanthurai Tiger Reserve is located in this region.



### **Mahendragiri Hills:**

- ✚ This continuous range is situated along the border of Kanyakumari and Tirunelveli districts and is a part of the southern range of the Western Ghats.
- ✚ Its average height is 1,645 metres. ISRO Propulsion Complex, a test facility for Indian Space Research Organisation's launch vehicles and satellite propulsion systems, is situated on the lower slopes of this mountain.

### **The Eastern Ghats:**

- ✚ Unlike Western Ghats, Eastern Ghats is a discontinuous and irregular one. It is dissected at many places by the rivers, which drain into the Bay of Bengal.
- ✚ Its height ranges from 1,100 to 1,600 metres. These hills separate the plains from plateaus. Javadhu, Servarayan, the Kalrayan, Kollimalai and Pachaimalai are the major hills of the Eastern Ghats of Tamil Nadu and are located in northern districts of the state.

### **Javadhu Hills:**

- ✚ Javadhu hills are an extension of the Eastern Ghats spread across parts of Vellore and Tiruvannamalai districts and separate these two districts.
- ✚ Many peaks with the height of 1,100–1,150 metres are located in this range. Melpattu is its highest peak.
- ✚ The Vainu Bappu Observatory (VBO) Kavalur, which began operations in 1967, is located on these hills. Many parts of this range are covered with bluish grey granites.
- ✚ It is noted for its fruit bearing trees, medicinal herbs and sandalwoods. Due to illegal logging, sandalwood trees are disappeared now.

### **Kalvarayan Hills:**

- ✚ The name 'Kalvarayan' comes from the word 'Karalar', the ancient name of the present tribes. It is another major range of hills in the Eastern Ghats of Tamil Nadu.
- ✚ This range, along with the Pachaimalai, Aralvaimalai, Javadhu and Servarayan hills, separates the river basins of Cauvery and Palar.
- ✚ The height of this hill ranges from 600 to 1,220 metres. These hills have two sections. The northern section is referred as the Chinna Kalvarayan and the southern one the Periya Kalvarayan.
- ✚ The average height of Chinna Kalvarayan is 825 metres and the Periya Kalvarayan is 1,220 metres.

### **Servarayan Hills:**

- ✚ It is a mountain range located near the Salem city with the height ranging from 1,200 to 1,620 metres. The name of the range comes from a local deity, Servarayan.
- ✚ The highest peak in the southern part of the Eastern Ghats is located in this range. The peak is Solaikaradu and its height is 1,620 metres.
- ✚ The hill station Yercaud, which is known as poor man's Ooty, is located on this range. Servarayan temple is its highest point (1623 metres).

### **Kolli Hills:**

- ✚ It is a small mountain range located in Namakkal district. It covers an area of about 2,800 sq.km. It rises up to 1300 metres.
- ✚ This is a mountain range that runs almost parallel to the east coast of South India. Arpaleeswarar temple located on this range is an important pilgrim centre.
- ✚ It has the largest cover of evergreen or shola forest when compared to other parts of the Eastern Ghats.

Several coffee plantations, fruits, flowers and silver oak estates are found in this region.

### **Pachaimalai:**

- ✚ It is the lowest hill range, spreads over the districts of Perambalur, Tiruchirapalli and Salem. In Tamil language, pachai means green.
- ✚ The vegetation in this range is greener than the vegetative cover of the other hills in this region. Hence it is named as 'Pachai malai'.
- ✚ Jackfruit is a popular seasonal agricultural product of these hills.

### **Plateaus of Tamil Nadu:**

Plateaus of Tamil Nadu are located between the Western Ghats and the Eastern Ghats. It is roughly triangular in shape and covers an area of about 60,000 sq.km. Its height increases from east to west.

Its height ranges between 150 and 600 metres. This plateau is broader in the north and very narrow in the south. It has many subdivisions.

Bharamahal plateau is a part of the Mysore plateau situated in the northwestern part of Tamil Nadu. Its height ranges from 350 to 710 metres.

Dharmapuri and Krishnagiri districts are located in this region. Coimbatore plateau lies between the Nilgiris and Dharmapuri districts. Its height varies from 150 to 450 metres. This region includes Salem, Coimbatore and Erode districts. The area of this plateau is about 2,560 sq.km. Its height varies from 352 to 710 metres. Moyar river separates this plateau from the Mysore plateau.

Rivers like Bhavani, Noyyal and Amaravathi, which originate from Western Ghats, form valleys in this region. Many intermountain plateaus are found in the region of the Nilgiris. Sigur plateau is one such plateau. Madurai plateau found in Madurai district extends up to the foothills of the Western Ghats. Vaigai and Thamirabarani basins are located in this zone.

### **Plains of Tamil Nadu:**

- ✚ The plains of Tamil Nadu may be divided into two, namely inland plains and coastal plains. Inland plains are drained by the rivers Palar, Ponnaiyar, Cauvery and Thamirabarani.
- ✚ Cauvery plains are one of the most important fertile plains of the state. The plains of Cauvery are found in Salem, Erode, Karur, Tiruchirapalli, Pudukottai, Thanjavur, Tiruvarur and Nagapattinam districts.
- ✚ Coastal plains of Tamil Nadu are also called Coromandel or Cholamandalam (land of Cholas) plain, which extends from Chennai to Kanyakumari. It is formed by the rivers that flow towards east drain in the Bay of Bengal.
- ✚ It is more than 80 kilometres wide at some places. Though it is an emerged coast, some parts are submerged into the sea.
- ✚ The sand dunes formed along the coast of Ramanathapuram and Thoothukudi districts are called Teri.
- ✚ Coral rocks are found at the head of Gulf of Mannar in the east coastal plain.

### **Beaches:**

- ✚ The Coromandel Coast along the Bay of Bengal consists of many beautiful and exotic beaches. The golden sands of Tamil Nadu beaches are scattered with palm and casuarinas groves.
- ✚ Marina and Elliot beaches of Chennai, Kovalam and Silver beaches of Kanyakumari are some of the famous beaches in Tamil Nadu.

### **Drainage:**

- ✚ Rivers of Tamil Nadu are its lifeline. Though it has many rivers, the rivers of Cauvery, Palar, Ponnaiyar, Vaigai and Thamirabarani are the notable ones.
- ✚ Most of the rivers of Tamil Nadu originate from Western Ghats and flow towards east and drain into the Bay of Bengal.
- ✚ All the rivers of the state are non-perennial except Thamirabarani. It is perennial as it is fed by both the southwest and northeast monsoons.

## Cauvery

- ✚ The river Cauvery originates at Talacauvery in the Brahmagiri hills of Kodagu(coorg) district of Karnataka in the Western Ghats.
- ✚ About 416 km of its course falls in Tamil Nadu. It serves as the boundary between Karnataka and Tamil Nadu for a distance of 64 km.
- ✚ It forms Hogenakkal waterfalls in Dharmapuri district. Mettur Dam, also called as the Stanley Reservoir, is located across this river in Salem district.
- ✚ A tributary called Bhavani joins Cauvery on the right bank about 45 km from the Mettur Reservoir. Thereafter, it takes easterly course to enter into the plains of Tamil Nadu. Two more tributaries, Noyyal and Amaravathi, confluence the river on the right bank at Thirumukkudal 10 km from Karur.
- ✚ The river is wider in this region, where it is called as 'Agandra Cauvery'. In Tiruchirappalli district, the river branches into two parts.
- ✚ The northern branch is called Coleroon or Kollidam and the southern branch remains Cauvery. From here, the Cauvery delta begins.
- ✚ After flowing for about 16 km, the two branches join again to form the 'Srirangam Island'.
- ✚ The Grand Anaicut, also called as Kallanai was built across the river Cauvery. After Kallanai, the river breaks into a large number of distributaries and forms a network all over the delta.
- ✚ The network of distributaries within the delta of Cauvery in the coast is called as the 'Garden of Southern India'. It merges into Bay of Bengal to the south of Cuddalore.

## Palar:

- ✚ The Palar river rises beyond Talagavara village in the Kolar district of Karnataka. The Palar drains an area of 17,871 sq.km, out of which nearly 57% lies in Tamil Nadu and the rest in the states of Karnataka and Andhra Pradesh.
- ✚ Ponnai, Goundinya Nadhi, Malattar, Cheyyar and Kiliyar are its major tributaries. Its total length is 348 km, out of which 222 km of its course falls in Tamil Nadu.

- ✚ It flows through the districts of Vellore and Kancheepuram before entering into Bay of Bengal near Kuvattur.

#### **Then Pennaiyar/Then Ponnaiyar:**

- ✚ It originates from the eastern slope of Nandi Durga hills in eastern Karnataka. It drains an area of 16,019 sq.km, of which nearly 77% lies in Tamil Nadu.
- ✚ It flows for a distance of 247 km in the southeasterly direction in the districts of Krishnagiri, Dharmapuri, Vellore, Tiruvannamalai, Cuddalore and Villupuram. It branches into two, viz.
- ✚ Gadilam and the Ponnaiyar near Tirukoilur Anaicut. Gadilam joins the Bay of Bengal near Cuddalore and Ponnaiyar near the Union Territory of Puducherry. Chinnar, Markandanadhi, Vaniar and Pambar are its tributaries.
- ✚ Heavy rain at the river's source cause sudden but short-lived floods. The river is extensively dammed for irrigation, especially in Tamil Nadu.
- ✚ There are reservoirs at Krishnagiri and Sathanur across this river. The Ponnaiyar is considered sacred by Hindus and festivals are held during the Tamil month of Thai (January–February).

#### **Vaigai:**

- ✚ Vaigai river rises from the eastern slopes of the Varusanadu hills of Western Ghats of Tamil Nadu.
- ✚ It drains an area of 7,741 sq.km, which lies entirely in the state of Tamil Nadu. It flows through the districts of Madurai, Sivaganga and Ramanathapuram.
- ✚ Its length is 258 km. It discharges its water into the Ramnad Big Tank and some other small tanks.
- ✚ The surplus water from the tanks is finally discharged into Palk Strait near Ramanathapuram.

### **Thamirabarani:**

- ✚ The name is interpreted as Thamiram (copper) and Varuni (streams of river). The water of this river gives a copper like appearance due to the presence of dissolved suspended red soil.
- ✚ It originates from a peak in Pothigai hills on the Western Ghats above Papanasam in the Ambasamudram taluk.
- ✚ The origin of the river is associated with Sage Agasthiyar. It courses through the districts of Tirunelveli and Thoothukudi and finally flow into the Bay of Bengal near Punnaikayal in Thoothukudi district.
- ✚ Karaiyar, Servalar, Manimuthar, Gadanathi, Pachaiyar, Chittar and Ramanathi are its main tributaries.

### **Climate:**

- ✚ The Tropic of Cancer divides India roughly into two equal parts and the state Tamil Nadu lies to the south of Tropic of Cancer, which is near the Equator.
- ✚ As it receives vertical sunrays, the temperature of the state is relatively high throughout the year. Though the state falls within the hot climatic zone, the east coast of Tamil Nadu enjoys tropical maritime climate.
- ✚ The Bay of Bengal and Indian Ocean influence the climate of the coastal regions. The annual temperature ranges from 18° to 43° and the annual rainfall is 958.5 mm.
- ✚ While the east coast experiences tropical maritime climate, the western region of the state enjoys the mountainous climate. This climate prevails over the Blue Mountains, Anaimalai and the Kodaikanal hills.
- ✚ Thick forests and high altitude make the climate of these areas cool and pleasant. Thus stations in this region attract thousands of people during the summer season.
- ✚ Low altitude and distance from the sea are the reasons for high temperature and dry conditions in the central part of Tamil Nadu.
- ✚ The migration of vertical sun's rays leads to the formation of different seasons in Tamil Nadu as follows.

### **Winter Season:**

- ✚ During January and February, the vertical rays of the sun fall between the Tropic of Capricorn and the Equator.
- ✚ Hence, Tamil Nadu and India on the whole receive slanting rays from the sun. So, the weather is slightly cooler during these months.
- ✚ The difference between summer and winter temperature is not very high. Winter temperature in Tamil Nadu varies from 15°C to 25°C.
- ✚ However, in the hill stations, the winter temperature drops below 5°C occasionally. Some valleys in the Nilgiris record even 0°C.
- ✚ This drop in temperature leads to the formation of thick mist and frost. This season is practically dry.

### **Summer Season:**

- ✚ The apparent migration of the sun towards north during March, April and May results in the reception of vertical sun's rays by South India.
- ✚ Thus there is a steady rise in temperature from the equator. Hence, Tamil Nadu located to the south of Tropic of Cancer, experiences high temperature. Generally the temperature varies from 30°C to more than 40°C.
- ✚ During this season particularly in the month of May, southern part of the state receives some rainfall from pre-monsoon showers (Mango/Blossom showers) and some parts experience convectional rainfall.

### **Southwest Monsoon:**

- ✚ The intense heating of the landmass of the north by the sun during March to May creates a well-developed low pressure in North India, which draws wind from the Indian Ocean.
- ✚ This results in the formation of southwest monsoon. During this season, Tamil Nadu is located in the rain shadow region for the wind, which blows from the Arabian Sea. As a result, Tamil Nadu receives only a meagre rainfall from this monsoon.



- ✚ Rainfall during this season decreases from west to east. Coimbatore plateau receives an average of 50 cm rainfall.
- ✚ However, the southern districts like Kanyakumari, Tirunelveli and The Nilgiris record 50–100 cm rainfall during this period. The rainfall is scanty in the eastern part of the state.

### **Northeast Monsoon:**

- ✚ The northeast monsoon season commences from the month of October and lasts till mid-December.
- ✚ The high pressure created over Central Asia and northern part of India becomes the source for the northeast monsoon winds.
- ✚ The apparent migration of the sun from Tropic of Cancer to the Tropic of Capricorn causes a change in receiving temperature and air pressure during this season. It makes the wind to blow towards Bay of Bengal from North India.
- ✚ After reaching Bay of Bengal, the wind gets deflected by Coriolis force and takes the northeast direction. Hence it is known as northeast monsoon.
- ✚ As the northeast monsoon is a part of returning of southwest monsoon wind, it is also called as the retreating monsoon. This is the main rainy season for Tamil Nadu, accounting for its 48% of annual rainfall.
- ✚ Coastal districts of the state get nearly 60% of their annual rainfall and the interior districts get about 40–50% of the annual rainfall during this season.
- ✚ Tropical cyclones are common during this season. Cyclone originating from the Bay of Bengal brings heavy rainfall to the east coastal regions of Tamil Nadu.
- ✚ More than 50% of the state's rainfall is received from tropical cyclones during this period and east coastal region receives 100 to 200 cm of rainfall.
- ✚ The rainfall received by the central and north western parts is 50–100 cm. The cyclones sometimes disturb the cultivation of crops and cause severe damage to life and property.

### **Soils of Tamil Nadu:**

- ✚ Soil is the loose material mainly formed by the weathering and erosion of rocks. It forms an important element of agriculture.
- ✚ It provides essential minerals and nutrients for the growth of vegetation. Soil is one of the important non-renewable resources in the world. It takes 300–1,000 years to form two inches of soil.
- ✚ The soil of a place depends on the factors like climate, parent rocks and vegetative cover of the respective places.
- ✚ The soils in Tamil Nadu are broadly classified into five types according to their characteristics. They are alluvial, black, red, laterite and saline soils.

### **Alluvial Soil:**

- ✚ Alluvial soils are formed by the deposition of silt by the rivers. Alluvial soils are generally fertile as they are rich in minerals such as lime, potassium, magnesium, nitrogen and phosphoric acid. It is deficient in nitrogen and humus.
- ✚ It is porous and loamy. Paddy, sugarcane, banana and turmeric are cultivated in this soil. It is found in the river valley regions and the coastal plains of Tamil Nadu.
- ✚ Generally this type of soil is found in the districts of Thanjavur, Tiruvarur, Nagapattinam, Villupuram, Cuddalore, Tirunelveli and Kanyakumari. It is also found to a small extent along the river valleys in few interior districts.

### **Black Soil:**

- ✚ Black soils are formed by the weathering of igneous rocks. It is also known as regur soil. As cotton grows well in this soil, it is also called as black cotton soil.
- ✚ This soil is developed over the Deccan lava granite region under semiarid conditions. It is fine textured and clayey in nature. It is poor in phosphoric acid, nitrogen and organic matter.

- ✚ Chief minerals found in this soil are calcium, magnesium, carbonates, potash and lime. Cotton, sorghum, cumbu and fodder crops are the major crops cultivated in the black soil regions of Tamil Nadu.
- ✚ Black soils are found extensively in the districts of Coimbatore, Madurai, Virudhunagar, Tirunelveli and Thoothukudi.

### **Red Soil:**

- ✚ Red soils cover over two-thirds of the total area of Tamil Nadu. They are found particularly in the central districts of the state.
- ✚ This soil is sandy and loamy in texture. However, the characteristic features of the red soil vary according to its formation and climatic condition under which the soil was formed. Red soil is porous, friable and non-retentive of moisture.
- ✚ The colour of the soil is due to the presence of high content of iron oxides. This soil is poor in nitrogen, phosphorus, acids and humus. paddy, ragi, tobacco and vegetables are the chief crops grown in this soil.
- ✚ Almost all types of crops can be grown in this soil with the application of manure and irrigation facilities. It is dominantly found in Sivagangai and Ramanathapuram districts.

### **Laterite Soil:**

- ✚ This soil is formed by the process of intense leaching. Laterite soils are found in some parts of Kancheepuram, Tiruvallur and Thanjavur districts and some patches over the mountainous region in the Nilgiris.
- ✚ Crops grown in this soil are paddy, ginger, pepper and plantains. It is also suitable for the cultivation of tea and coffee plants.

### **Saline Soil:**

- ✚ Saline soils in Tamil Nadu are confined to the Coromandel coast. Vedaranyam has a pocket of saline soil.
- ✚ However, the tsunami waves on December 26, 2004 brought a lot of sand and deposited it all along the east coast of Tamil Nadu.

- ✚ The tsunami made the coastal areas unsuitable for cultivation to a considerable extent.

### **Soil Erosion:**

- ✚ Soil is a non-renewable resource. It is very difficult to replace the soil once it gets degraded.
- ✚ Deforestation, overgrazing, urbanisation and heavy rain are responsible for soil erosion in Tamil Nadu.
- ✚ Soil erosion reduces the fertility of soils, which in turn reduces agricultural productivity. So, it is necessary to take intensive care to conserve the soil resources.

### **Demographic Features:**

#### **Tamil Nadu Population 2011**

As per details from Census 2011, Tamil Nadu has population of 7.21 Crores, an increase from figure of 6.24 Crore in 2001 census. Total population of Tamil Nadu as per 2011 census is 72,147,030 of which male and female are 36,137,975 and 36,009,055 respectively. In 2001, total population was 62,405,679 in which males were 31,400,909 while females were 31,004,770. The total population growth in this decade was 15.61 percent while in previous decade it was 11.19 percent. The population of Tamil Nadu forms 5.96 percent of India in 2011. In 2001, the figure was 6.07 percent.

Recently as per Tamil Nadu census data, 74.55% houses are owned while 23.37% were rented. In all, 74.38% couples in Tamil Nadu lived in single family. In 2011, 52.52% of Uttar Pradesh population had access to Banking and Non-Banking Finance Corporation. Only 4.18% of Uttar Pradesh population had internet facility which is likely to improve in 2021 due to Jio. 4.30% of family in Uttar Pradesh owned car while 32.32% owned two wheller. In few months we will also get details of election data for Tamil Nadu.

Description	2011	2001
Approximate Population	7.21 Crores	6.24 Crore
Actual Population	72,147,030	62,405,679
Male	36,137,975	31,400,909
Female	36,009,055	31,004,770
Population Growth	15.61%	11.19%
Percentage of total Population	5.96%	6.07%
Sex Ratio	996	987
Child Sex Ratio	943	942
<u>Density/km<sup>2</sup></u>	<u>555</u>	<u>480</u>
<u>Density/mi<sup>2</sup></u>	<u>1,437</u>	<u>1,243</u>
<u>Area(Km<sup>2</sup>)</u>	<u>130,060</u>	<u>130,058</u>
<u>Area mi<sup>2</sup></u>	<u>50,216</u>	<u>50,216</u>
<u>Total Child Population (0-6 Age)</u>	<u>7,423,832</u>	<u>7,235,160</u>
<u>Male Population (0-6 Age)</u>	<u>3,820,276</u>	<u>3,725,616</u>
<u>Female Population (0-6 Age)</u>	<u>3,603,556</u>	<u>3,509,544</u>
<u>Literacy</u>	<u>80.09 %</u>	<u>73.45 %</u>
<u>Male Literacy</u>	<u>86.77 %</u>	<u>82.42 %</u>
<u>Female Literacy</u>	<u>73.44 %</u>	<u>64.43 %</u>
<u>Total Literate</u>	<u>51,837,507</u>	<u>40,524,545</u>
<u>Male Literate</u>	<u>28,040,491</u>	<u>22,809,662</u>
<u>Female Literate</u>	<u>23,797,016</u>	<u>17,714,883</u>

### Tamil Nadu Population 2021

As per projection, population of Tamil Nadu in 2021 is 8.50 Crore.

### Tamil Nadu Urban Population 2011

Out of total population of Tamil Nadu, 48.40% people live in urban regions. The total figure of population living in urban areas is 34,917,440 of which 17,458,910 are males and while remaining 17,458,530 are females. The urban population in the last 10 years has increased by 48.40 percent.

Sex Ratio in urban regions of Tamil Nadu was 1000 females per 1000 males. For child (0-6) sex ratio the figure for urban region stood at 952 girls per 1000 boys. Total children (0-6 age) living in urban areas of Tamil Nadu were 3,512,530. Of total population in urban region, 10.06 % were children (0-6).

Average Literacy rate in Tamil Nadu for Urban regions was 87.04 percent in which males were 91.80% literate while female literacy stood at 82.31%. Total literates in urban region of Tamil Nadu were 27,335,312.

Description	Rural	Urban
Population (%)	51.60 %	48.40 %
Total Population	37,229,590	34,917,440
Male Population	18,679,065	17,458,910
Female Population	18,550,525	17,458,530
Population Growth	6.61 %	27.05 %
Sex Ratio	993	1000
Child Sex Ratio (0-6)	936	952
Child Population (0-6)	3,911,302	3,512,530
Child Percentage (0-6)	10.51 %	10.06 %
Literates	24,502,195	27,335,312
Average Literacy	73.54 %	87.04 %
Male Literacy	82.04 %	91.80 %
Female Literacy	64.55 %	82.31 %

- ✚ Average literacy rate of Tamil Nadu is 80.09 percent.
  - ✚ Male literacy rate in Tamil Nadu is 86.77 percent.
  - ✚ Female literacy rate in Tamil Nadu is 73.44 percent.
  - ✚ Total literates in Tamil Nadu are 51,837,507 people.
  - ✚ Male literates in Tamil Nadu are 28,040,491.
  - ✚ Female literates in Tamil Nadu are 23,797,016.
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