

Unit - 7

Human
Geography of
Tamil Nadu
 Learning Objectives

- To understand the agricultural factors, major crops and their distribution in Tamil Nadu
- To learn about the water resources of Tamil Nadu
- To study the mineral and industrial resources of Tamil Nadu
- To analyze the population and its composition in Tamil Nadu
- To learn about the man made disasters in Tamil Nadu



Introduction

Human geography refers to the study of ways of development of human societies and their operation in relation to their physical environment. This chapter focuses on the distribution, characteristics and utilisation of different resources in Tamil Nadu. We have studied earlier that the earth is endowed with a variety of natural resources such as landforms, rivers, soil, natural vegetation, water and wildlife. These resources are useful only when they are utilised. Human beings use these resources using their intelligence and skill. Thus, the human beings are the most significant resource on the earth surface. They turn all these natural resources into useful products with their skills and abilities.

7.1 Agriculture

The word "**agriculture**" is derived from the Latin words "**ager and cultura**", which means field and growing. Agriculture is a practice of farming that includes the cultivation of crops, rearing of animals, birds, forestry, fisheries and other related activities. Agriculture is the

major occupation in Tamil Nadu. Agriculture has been the mainstay of the state's economy since independence with more than 65% of the population depends upon this sector for their living. Agriculture provides employment for rural people on a large scale. There is a strong link between agriculture and economic growth. Paddy, millets and pulses are the principal food crops of the state. Sugarcane, cotton, sunflower, coconut, cashew, chillies, gingelly, groundnut, tea, coffee, cardamom and rubber are the major commercial crops.

7.2 Geographical determinants
of Agriculture

Landform, climate, soil and irrigation are the factors that determine the growth of agriculture.

Landform

Tamil Nadu is a land of diverse landscape comprising of hills, plateaus and plains. Among them the plains are most suitable for agriculture. The plains with alluvial soil enhances agricultural productivity. Example: Plains of cauvery. Agriculture in the plateau is moderate and is poor on the hills.

Climate

Tamil Nadu is situated in the tropical zone, which is nearer to the equator. The state experiences a tropical climate. Hence, the temperature in Tamil Nadu is relatively high almost throughout the year. So, only the tropical crops are cultivated. Water is another limiting factor of agriculture. Northeast monsoon is the major source of rainfall for Tamil Nadu. Therefore, the major cropping season begins with this season. The rainfall in this season and the irrigation facilities affect agriculture to a large extent.

Soil

Soil is one of the most essential elements of agriculture. It provides essential minerals or nutrients for the growth of crops and vegetation. The regions of river valleys and the coastal plains are the most agriculturally productive regions of the state as they are covered with fertile alluvial soil.

Irrigation

Monsoon rainfall in the state is highly irregular. Further it is seasonal. Hence, irrigation becomes necessary for successful cultivation of crops in the state. In the dry regions, rain-fed crops are cultivated.

Types and regions of Agriculture Practices in Tamil Nadu

Farming type	Area practiced
Subsistence intensive agriculture	Practiced all over Tamil Nadu with few exceptions.
Plantation Agriculture	Hill slopes of Eastern and Western Ghats.
Mixed farming	Banks of River Cauvery and Thenpennai.

7.3 Cropping Seasons in Tamil Nadu

Farmers select different crops for different seasons of cultivation. It is based on the temperature and availability of moisture

in the soil. Accordingly, the state has the following cropping seasons.

Name	Sowing	Harvesting	Major crops
Sornavari (chittirai pattam)	April-May	August-September	Millets and cotton
Samba (Adipattam)	July-August	January-February	Paddy and sugarcane
Navarai	November-December	February-March	Fruits, vegetables, cucumber and watermelon

7.4 Distribution of major crops in Tamil Nadu

Paddy

Paddy is the most important staple food crop of Tamil Nadu. Ponni and kichadi samba are the major varieties of paddy grown in Tamil Nadu. Though it is cultivated all over Tamil Nadu, its cultivation is highly concentrated in Thanjavur, Tiruvarur, Tiruvallur, Kancheepuram, Villupuram, Cuddalore and



Paddy Cultivation



The Tamil Nadu Rice Research Institute (TRRI) is an Indian research institute working in the field of rice under Tamil Nadu Agricultural University (TNAU). It is situated at Aduthurai, in Thanjavur district, it was established in April, 1985 in TNAU to meet the research requirements of the region with the help of existing Agricultural Colleges and Research centres and perform lead function for rice and rice based cropping system research.

Tirunelveli districts. It ranks third in the production of rice among the states of India. The deltaic region of river cauvery (the undivided Thanjavur district) is the major rice-producing region of Tamil Nadu. So, this region is rightly called as the "**Granary of Tamil Nadu.**"

Millets

Millets form staple food of nearly one-third of human population of Tamil Nadu. Sorghum/jowar (cholam), ragi (kezhvaragu) and bajra (kambu) are the major millets. These are grown not only in drier areas but also in the coastal plains. Sorghum is grown in the Coimbatore plateau and Kambam valley. Ragi is grown in Coimbatore, Dharmapuri, Vellore and Cuddalore districts. Bajra is mostly cultivated in Ramanathapuram, Tirunelveli, Tenkasi, Karur, Perambalur and Salem districts.

India observed 2018 as national year of millets. FAO has decided to observe 2023 as the International year of millets.

Pulses

Pulses are the major source of protein. Bengal gram, black gram, green gram, cowpea and horse gram are the important pulses grown in Tamil Nadu. Pulses are grown in a wide range of climatic conditions mostly in drier regions with or without irrigation. Mild cool climate and a low to moderate rainfall are best suited for these crops. Pulses serve as excellent fodder. Pulses are grown in almost all districts in the state except Chennai, Nilgiris and Kanyakumari. Coimbatore leads in the production of Bengal gram. Vellore and Salem districts produce red gram. Tiruvarur, Nagapattinam, Mayiladuthurai and Thoothukudi districts are the principal producers of green gram and black gram. Horse gram is widely cultivated in Dharmapuri and Krishnagiri districts.

Oil Seeds

Groundnut, gingelly castor, coconut, sunflower and mustard are some of the oilseeds that are grown in Tamil Nadu. Apart from its

Second Green Revolution (Eco-Farming or Organic Farming)

In organic farming synthetic fertilizers, pesticides, growth regulator and livestock feed additives are not used. This type of farming rely on crop rotation, crop residues, animal manure, off-farm organic wastes and biological pest control to maintain soil productivity. This farming method is being adopted by very few farmers in the state.

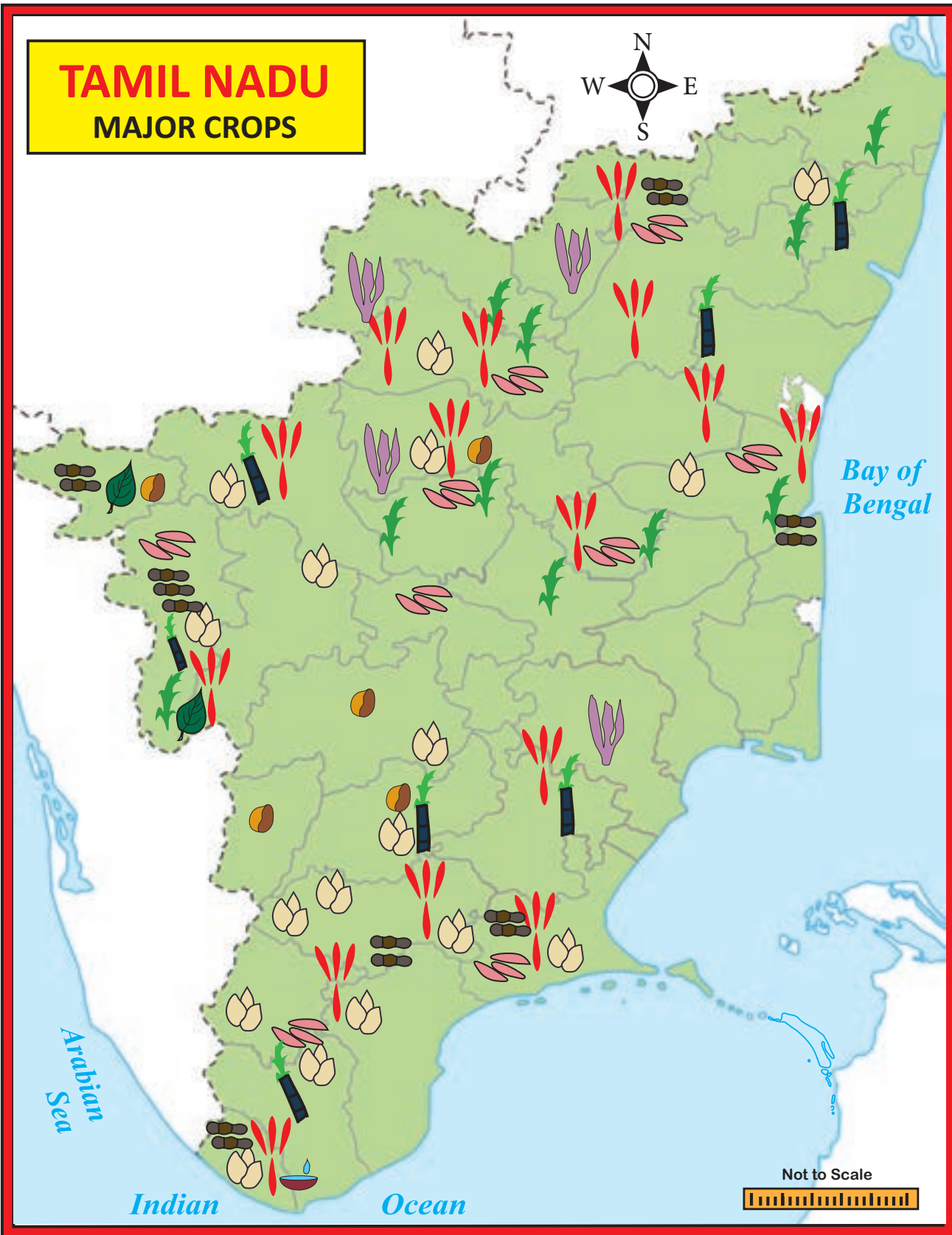
use in food preparation, it is used in industries as a lubricant, in the manufacture of varnish, soaps, candles, cosmetics and pharmaceuticals. Groundnut is the major oilseed of the state. The cultivation of groundnut is mostly concentrated in Vellore, Tiruvannamalai, Villupuram, Kalakurichi, Salem and Pudukottai districts. It is also grown to some extent in Dharmapuri, Cuddalore, Perambalur and Madurai. Erode, Ramanathapuram, Sivagangai and Virudhunagar districts are its minor producers. Coconut is grown in Coimbatore, Thanjavur and Kanyakumari districts.

Sugarcane

It is one of the major cash crops of the state. It is an annual crop. It requires high temperature and heavy rainfall. It grows well in the tropical region. Major sugarcane-producing districts are Tiruvallur, Kancheepuram, Chengalpattu, Vellore, Ranipet, Tirupattur, Cuddalore, Tiruchirappalli, Coimbatore, Erode, Tirunelveli and Tenkasi.

Cotton

Cotton is a fibre and cash crop. It requires black soil, long frost-free condition and warm and humid weather for its cultivation. Humid weather in the early stages and hot, dry weather during harvest period is suitable for this crop. It is predominantly cultivated in Coimbatore plateau and Vaigai-Vaippar river basins. It is also cultivated in Madurai, Ramanathapuram, Virudhunagar, Tirunelveli, Thoothukudi, Salem and Dharmapuri districts.



LEGEND

	PADDY		SUGARCANE		RAGI		COTTON		OIL SEEDS
	PULSES		MILLETS		TEA		COFFEE		RUBBER

TANTEA (TANTEA-Tamil Nadu Tea Plantation Corporation Limited) is one of the Biggest Black Tea Producers in India with high quality clonal tea. Its plantation spreads over nearly 4500 hec.

Plantation crops

Tea, coffee, cashew, rubber and pepper are the major plantation crops of the state. Tamil Nadu ranks second in area and production of tea in India next to Assam. Tea plantations are found in the hills of the Nilgiris and Coimbatore. Coffee plants are grown in the hilly slopes of Dindigul, Madurai, Theni, Namakkal and Salem districts. Yercaud, Kolli Hills and Kodaikanal are notable for coffee plantations. Tamil Nadu stands second in area and production of coffee next to Karnataka. Rubber plantations are significant in Kanyakumari. Pepper is confined to the warm and wet slopes of Eastern and Western Ghats of Tamil Nadu. Cashew is extensively cultivated in Cuddalore district.

To promote organic farming a central scheme named 'National Project on Organic Farming' was launched Apart from general things (creating awareness, promoting organic fertilizers, training, capacity building etc.), the scheme provides financial assistance through Capital Investment Subsidy Scheme for agro-waste compost production units, bio-fertilizers/bio-pesticides production units, development and implementation of quality control regime, human resource development etc.

7.5 Livestock/Animal Husbandry

Livestock has remained an integral part of socio-economic fabric of rural people.

Goat

Goat is also known as '**poor man's cow**' in India. It forms a very important component in dry land farming system. In the marginal or undulating lands unsuitable for rearing of other types of cattle like cow or buffalo, goat is the best

Tamil Nadu Dairy Development Corporation Ltd. was transformed into the newly registered Tamil Nadu Co-operative Milk Producers Federation Limited Popularly known as "**Aavin**".

alternative. With very low investments, goat rearing can be made into a profitable venture for small and marginal farmers.

Sheep

Sheep is used for multiple purposes like wool, meat, milk, skins and manure, and forms an important component of the rural economy, particularly in the arid, semi-arid and mountainous areas of Tamil Nadu. It provides a dependable source of income to the shepherds through the sale of wool and animals.

Fishing

Since Tamil Nadu is a coastal state, fishing is one of the major occupations in the state. With widespread reservoirs and rivers, inland fishing also is also seen to a considerable extent.

Marine Fishing

Tamil Nadu coastal length is 906.9 km. An area of 41,412 sq.km of continental shelves of the state favours coastal fishing and Tamil Nadu is one of the leading states in marine fish production. Marine fishing is also called inshore fish or neritic fishing, carried out in oceans and seas. Large mechanised boats are used for fishing. In ocean or seawaters, fishing within few kilometres from the shoreline is called inshore fishing and the fishing far from the shore typically 20–30 miles out in water hundreds and thousands of feet deep is called off-shore fishing. The fish varieties caught are sharks, flying fish, cunch, catfish, silver bellies, and crabs. Chennai, Kanyakumari, Tirunelveli, Nagapattinam, Thanjavur and Ramanathapuram districts contribute about 40% to marine fish production in the state. Their coastal location favours fishing in these regions.

Inland Fishing

Inland fishing is carried out in lakes, rivers, ponds, estuaries, backwaters and swamps. Oysters and prawns are cultured in original nurseries. Catamaran, diesel boats and floating nets are used in fishing. Tamil Nadu Fisheries Department has introduced several programmes for the betterment of fishing. Vellore district leads in the production of inland fish production with 10% of state's production. Cuddalore, Sivagangai and Virudhunagar districts stand second with 9% of inland fish catch each.

7.6 Water Resource

Water is the precious gift of nature to humankind and millions of other species living on the earth.



Tamil Nadu constitutes 4% of India's land area and is inhabited by 6% of India's population, but has only 2.5% percent of India's water resources. More than 95% of the surface water and 80% of the ground water have already been put into use.

Surface Water Resources	Numbers
River Basin	17
Reservoirs	81
Tanks	41,127
Tube wells and other wells	4,98,644
Open wells	15,06,919
Total (Million Cubic metres)	2046788 MCM

Multipurpose River Valley Projects

Multipurpose river valley projects are basically designed for the development of irrigation for agriculture and hydropower generation. However, they are used for many other purposes as well.

Mettur Dam

The Mettur Dam was constructed in a gorge, where river Cauvery enters the plains. It is one of the oldest dam in India. It provides irrigation to Salem, Erode, Karur, Tiruchirappalli, Thanjavur, Tiruvarur and Nagapattinam districts farmlands.



Mettur Dam

Bhavani Sagar Dam

The Bhavani Sagar Dam is located 80 km away from Coimbatore city in the district of Erode. It has been constructed across the river Bhavani. This dam is one of the biggest earthen dams in the country.

Amaravathi Dam

The Amaravathi dam is situated 25 km away from Udumalpet in Tirupur district. The dam has been constructed across the river Amaravathi, a tributary of Cauvery. The dam was built primarily for irrigation and flood control. A small hydropower station has also been installed recently.

Krishnagiri Dam

Krishnagiri dam is situated at a distance of 7 km from Krishnagiri towards Dharmapuri.

Sathanur Dam

Sathanur Dam was constructed across the river Thenpennai in Chengam taluk. It is in the midst of Chennakesava hills. It irrigates the land in Thandrampet and Tiruvannamalai blocks. There is also a large crocodile farm and a fish grotto. Parks are maintained inside the dam for tourists and the gardens are used by the film industry.

Mullaiperiyar Dam

Mullaiperiyar dam was built by the British administration in 1895. It has been constructed on the Periyar river, which originates from Thekkady hills of Kerala. The dam was built mainly for watering the farming land of Tamil Nadu, which is perennially drought-prone.

Vaigai Dam

This dam built across the river Vaigai near Andipatti. The dam with a height of 111 feet can store water up to 71 feet. It is located 7 km from Andipatti and 70 km from Madurai. This dam was opened on 21 January, 1959.

Manimuthar Dam

Manimuthar dam is located about 47 km from Tirunelveli.

The Papanasam Dam

It is also known as Karaiyar dam and is located about 49 km away from Tirunelveli. The dam is used to irrigate Tirunelveli and Thoothukudi districts.

Parampikulam Aliyar Project

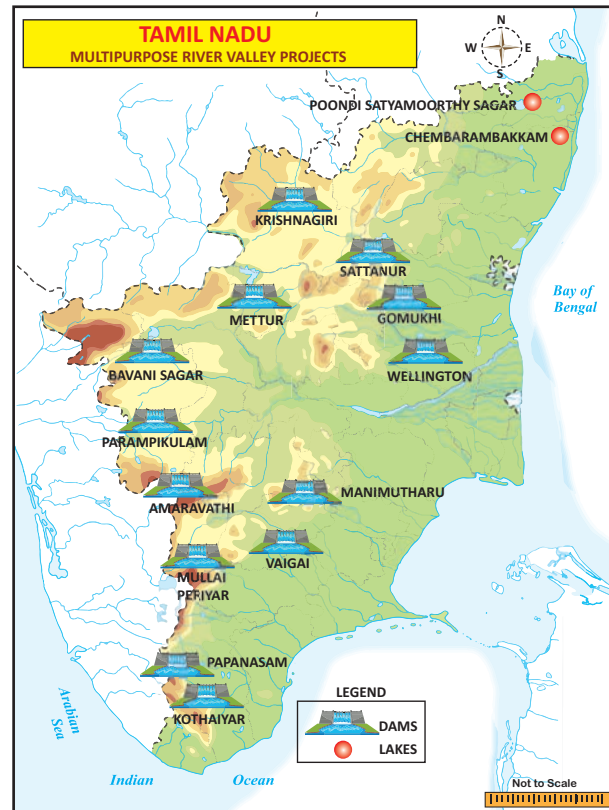
It is a joint venture of Tamil Nadu and Kerala states. It envisages the construction of seven interconnected reservoirs by harnessing the water of seven rivers, which include major rivers of Parambikulam and Aliyar.

Parappalar project is located near Ottanchatram. Its storage capacity is 167 million cubic feet of water. It is about 75 km from Madurai and is in Palani taluk.

Water Resource Management

Water resource management is the activity of planning, developing, distributing and managing the optimum use of water resources. The demand for water in Tamil Nadu is increasing at a fast rate both due to increasing population and also due to larger per capita needs triggered by economic growth. Demands from other sectors such as domestic and industries have been growing significantly. The state is heavily dependent on monsoon rains. Since the state is entirely dependent on rains

for recharging its water resources, monsoon failures lead to acute water scarcity and severe droughts. So, it is important to save water for us and the future generation.



7.7 Mineral Resources

Tamil Nadu is the leading holder of country's resources of vermiculite, magnetite, dunite, rutile, garnet, molybdenum and ilmenite. Neyveli has large lignite resources. Oil and gas are found in the Cauvery basin.

Iron ore deposits are found in Kanjamalai region in Salem district and Kavuthi and Vedyappan Malai region of Tiruvannamalai district. Bauxite is found in Servarayan Hills, Kotagiri, Udagamandalam, Palani and Kollimalai areas. Gypsum is obtained in Tiruchirappalli, Tirunelveli, Thoothukudi and Virudhunagar districts. Ilmenite and rutile are found in the sands of Kanyakumari beach. Limestone is available in Coimbatore, Cuddalore, Dindigul, Kancheepuram, Karur, Madurai, Nagapattinam, Namakkal, Perambalur, Ramanathapuram, Salem and Tiruvallur districts. Magnesite is obtained in Coimbatore, Dharmapuri, Karur,

Namakkal, the Nilgiris, Salem, Tiruchirapalli, Tirunelveli, Tirupattur and Vellore districts. Feldspar, quartz, copper and lead are also found in some parts of the state.

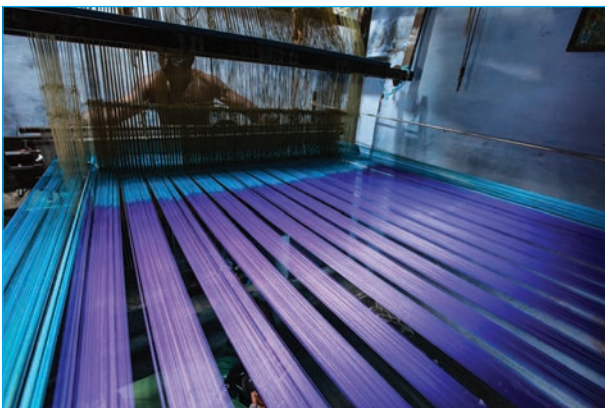
7.8 Industries

Industries use raw materials and convert them into usable product or goods. Textiles, sugar, paper, leather, cement, electrical equipment, automobiles, information technology and tourism are the major industries of Tamil Nadu.



Textile Industry

Textile industry is one of the traditionally well-developed industries in Tamil Nadu. The textile mills are concentrated in Coimbatore, Tirupur, Salem, Palladam, Karur, Dindigul, Virudhunagar, Tirunelveli, Thoothukudi, Madurai and Erode. Erode in Tamil Nadu is well known for marketing of handloom, power loom and readymade garments. Coimbatore is also known as the 'Manchester of South India'. Coimbatore, Tirupur, Erode, Karur and Salem contribute a major share to the state's economy through textiles. So, this region is referred as 'Textile Valley of Tamil Nadu'.



Textile Industry

Silk Textiles

Tamil Nadu occupies fourth position in the country in silk production. Kancheepuram silk is unique in its quality and is known

for its traditional value all over the world. Kancheepuram, Arani, Kumbakonam, Salem, Coimbatore, Madurai and Tirunelveli are the important silk-weaving centres in Tamil Nadu. Ramanathapuram has some specialised areas for the manufacturing of synthetic silk clothes.

Leather Industry

Tamil Nadu accounts for 60% of leather tanning processes of India and 38% of all leather footwear, garments and components. Hundreds of leather tanneries are located around Vellore and nearby towns, such as Ranipet, Ambur and Vaniyambadi. The Vellore district is the top exporter of finished leather goods in the country. Central Leather Research Institute (CLRI), a CSIR research laboratory, is located in Chennai.

GI Tag

GI (Geographical Indication) is a name or sign used on products which corresponds to a specific geographical location. It provides rights and protection of holders.

Some important GI Tags of Tamil Nadu are:

Place	Products
Arani	Silk
Kancheepuram	Silk
Coimbatore	Wet Grinder and Coracotton
Thanjavur	Paintings, Art plate, Doll and veenai
Nagercoil	Temple Jewellery
Erode	Turmeric
Salem	Venpattu(salem silk)
Bhavani	Jamakkalam
Madurai	Sungudi
Swamimalai	Bronze Icons
Nachiarkovil	Kuthuvilakku
Pattamadai	Mat
Nilgiri	Orthodox Embroidery
Mahabalipuram	Stone sculpture
Sirumalai	Hill banana
Eathamozhi	Coconut

Paper Industry

Tamil Nadu Newsprint and Papers Limited (TNPL) is a government of Tamil Nadu enterprise producing newsprint and printing and writing paper at its mill located at Kagithapuram in Karur district. TNPL is one of the most accomplished mills in the world, producing different varieties paper of acceptable quality primarily from bagasse and pulpwood. Other paper mills of the state are found in Pukkathurai of Kancheepuram district, Bhavanisagar, Pallipalayam, Paramathi Vellore, Coimbatore, Udumalaipet, Thoppampatti, Nilakkotai and Cheranmahadevi.

Cement Industry

Cement production and consumption continue to grow despite the general recession in the economy. India is one of the largest cement producers and ranked second in the world with an annual production capacity of 181 million tons. Tamil Nadu Cements Corporation Limited (TANCEM) is one among the major cement producers in Tamil Nadu operating two cement units: one at Ariyalur and another at Alangulam. Asbestos cement sheet plant at Alangulam and stoneware pipe unit at Virudhachalam are the other units of TANCEM. Sankar Cement, Zuari Cement, Ultratech Cement, Madras Cement and Dalmia Cement are the major private cement brands produced in Tamil Nadu.

7.9 Information Technology

According to National Association of Software and Services Companies (NASSCOM), the southern states continue to account for more than half of the country's total export of software. Tamil Nadu and Andhra Pradesh together account for 59.6% of India's total software exports. Tamil Nadu is the second largest software exporter in the country next to Karnataka.

The list of IT parks in Tamil Nadu

Tidel Park, Ascendas, Mahindra world city
4 IT & ITES SEZ TIDEL-II, IT & ITES SEZ
TIDEL-III, Coimbatore SEZ - Tidel Park

Special Economic Zones

Special economic zones (SEZs) provide an internationally competitive and hassle-free environment for exports. Units in SEZ manufacture goods and provide a range of services. SEZs are located in Nanguneri, Ennore, Hosur and Perambalur. IT & ITES SEZ named TIDEL-II and TIDEL-III and Bio-Pharmaceuticals SEZ are located in Chennai and Coimbatore SEZ called the TIDEL Park-IV is located in the city.

Manufacturing & Engineering Industry

The manufacturing industry is one of the vibrant sectors of the state economy and contributes significantly to the industrial output. The manufacturing industry broadly covers manufacture of machinery and equipment, motor vehicles, basic metal and alloy industries, metal products and repair of capital goods.

Automobile Industries

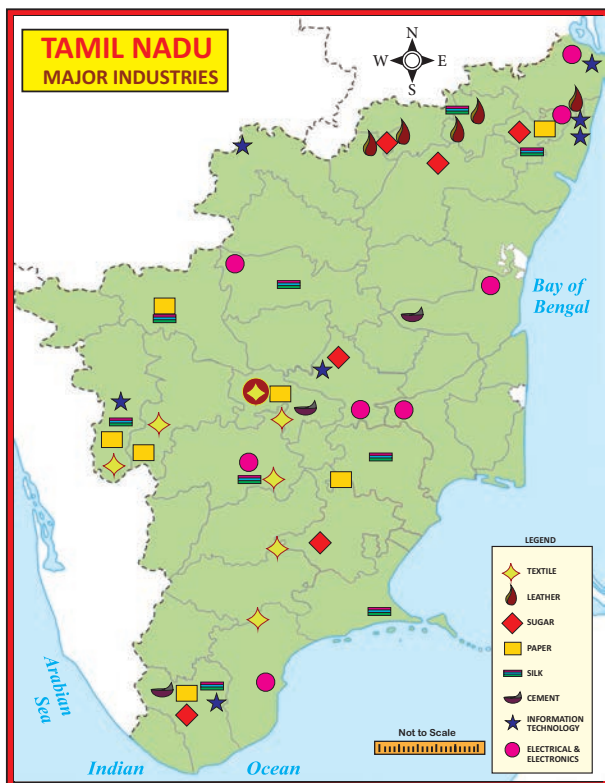
Tamil Nadu accounts for about 21% of passenger cars, 33% of commercial vehicles and 35% of automobile components produced in India. Major automobile manufacturers like Ford, Hyundai, HM-Mitsubishi, Ashok Leyland, and TAFE have their manufacturing base in Tamil Nadu.

Handlooms and Powerlooms

The handloom sector in the state is the single largest cottage industry providing livelihood to a large number of rural people and promoting export earnings. These societies mainly produce the cloth required for the scheme of 'Free Supply of Uniforms to School Children and Free Distribution of Sarees and Dhotis Scheme'.

Sugar Industry

Sugar industry in Tamil Nadu is an important agro-based industry. It plays a vital role in the economic development of the state, particularly in rural areas. The sugar industry provides large-scale direct employment to several thousands and indirect employment to several lakhs of farmers and agricultural labourers in the rural areas who are involved in cultivation of sugarcane, harvesting, transporting and other services.



Tourism Industry

Tourism is considered as an industry because of its enormous potential in creating employment for a large number of people. In recent years, the state has emerged as one of the leading tourist destinations for both domestic and foreign tourists. Tourism in Tamil Nadu is promoted by Tamil Nadu Tourism Development Corporation (TTDC). The presence of ancient monuments, pilgrim centres, hill stations, a variety of natural landscapes, long coastline, along with rich culture and heritage make Tamil Nadu the best destination for tourists.

7.10 Population

The term 'population' refers to the number of people living in a defined area. The statistical study of the characteristics of human population is called demography.



Regions of High Population

Coimbatore, Chennai, Tiruvallur, Kancheepuram, Villupuram, Dharmapuri, Salem, Madurai and Tirunelveli are the most populous districts in the state. Agriculture and industrial development are the main causes of high concentration of population of these districts.

Regions of Moderate Population

Tiruvannamalai, Cuddalore, Tiruchirappalli and Thanjavur districts have a population 30–35 lakh. Vellore, Dindugal, Virudhunagar and Thoothukudi districts each have a population of 15–20 lakh. Other than agriculture, small-scale industries and fishing along the coastal areas are the major occupations of people in these districts.

Regions of Sparse Population

The coastal districts Nagapattinam, Tiruvarur, Pudukottai, Ramanathapuram and Sivagangai have a less than 15 lakh. The Nilgiris district has a population of less than 10 lakh population.

Population Density

The state ranks 12th among the Indian states in population density. The national average density of population as per the 2011 Census is 382. Chennai is the densest district with 26,553 persons per sq.km followed by Kanyakumari, Tiruvallur, Kancheepuram, Madurai, Coimbatore, Cuddalore, Thanjavur, Nagapattinam, Salem, Vellore and Tiruchirappalli. These are the regions with high density of population. The least density of population is recorded in the Nilgiris and the other districts have moderate density of population.

Religion

Hinduism, Christianity and Islam are the major religions in the state. The Hindus constitute the largest of the population, followed by Christians and Muslims. Jainism, Sikhism and Buddhism and people of other religions also presence in the state.

Sex Ratio

The sex ratio represents the number of females per 1000 males.

The highest sex ratio is found in the Nilgiris district followed by Thanjavur district. The lowest sex ratio is reported in Dharmapuri district followed by Salem district.

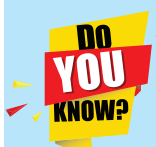
Literacy Rate

The district of Kanyakumari has reported the highest literacy rate while Dharmapuri district has the lowest rate. A high level of literacy rate is also seen in Chennai, Thoothukudi, the Nilgiris and Kancheepuram districts.

7.11 Transport and Communication

Roadways

The State has a total road length of 167,000 km, In which 60,628km are maintained by state Highways Department. It ranks second in India with a share of over 20% in total road projects under operation in the **Public-Private Partnership (PPP)** model.



NH - 44 is the longest national highway in Tamil Nadu which runs from Hosur to Kanniyakumari (627.2 km) Via Dharmapuri-Salem-Karur-Dindigul-Madurai-Tirunelveli.

NH - 785 is the shortest national highway in Tamil Nadu which runs from Madurai to Tuarankuruchi.

Railways

Tamil Nadu has a well-developed rail network as part of Southern Railway, headquartered at Chennai. The present Southern Railway network extends over a large area of India's southern peninsula, covering Tamil Nadu, Kerala, Puducherry, minor portions of Karnataka and Andhra Pradesh. Chennai has a well-established suburban railway network, a **Mass Rapid Transport system(MRTS)** and is currently developing a Metro system, with its first underground stretch in operation since May 2017.

Airways

Tamil Nadu has four major international airports. Chennai International Airport is currently the third largest airport in India after Mumbai and Delhi. Other international airports in Tamil Nadu include Coimbatore, Madurai and Tiruchirapalli airports. It also has domestic airports at Tuticorin and Salem.

Waterways

Tamil Nadu has three major ports. They are in Chennai, Ennore and Tuticorin. It has an intermediate port at Nagapattinam and 15 minor ports. All the minor ports are managed by the Tamil Nadu Maritime Board, Chennai Port. This is an artificial harbour and the second principal port in the country for handling containers.

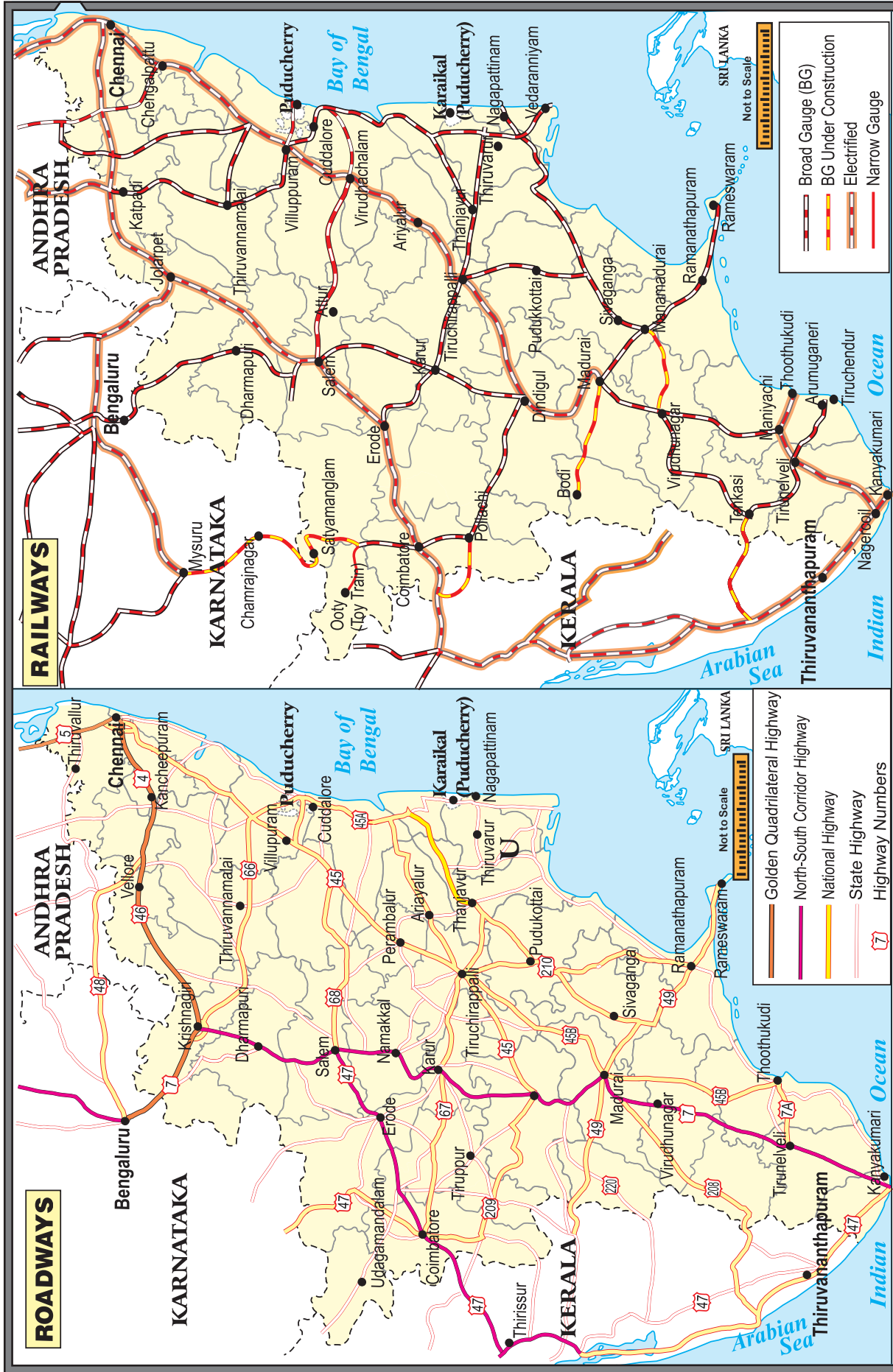
7.12 Communication

Communication is derived from the Latin word *communicare*, meaning 'to share'. The act of conveying or exchanging information is called means of communication. They are mass communication and personal communication.

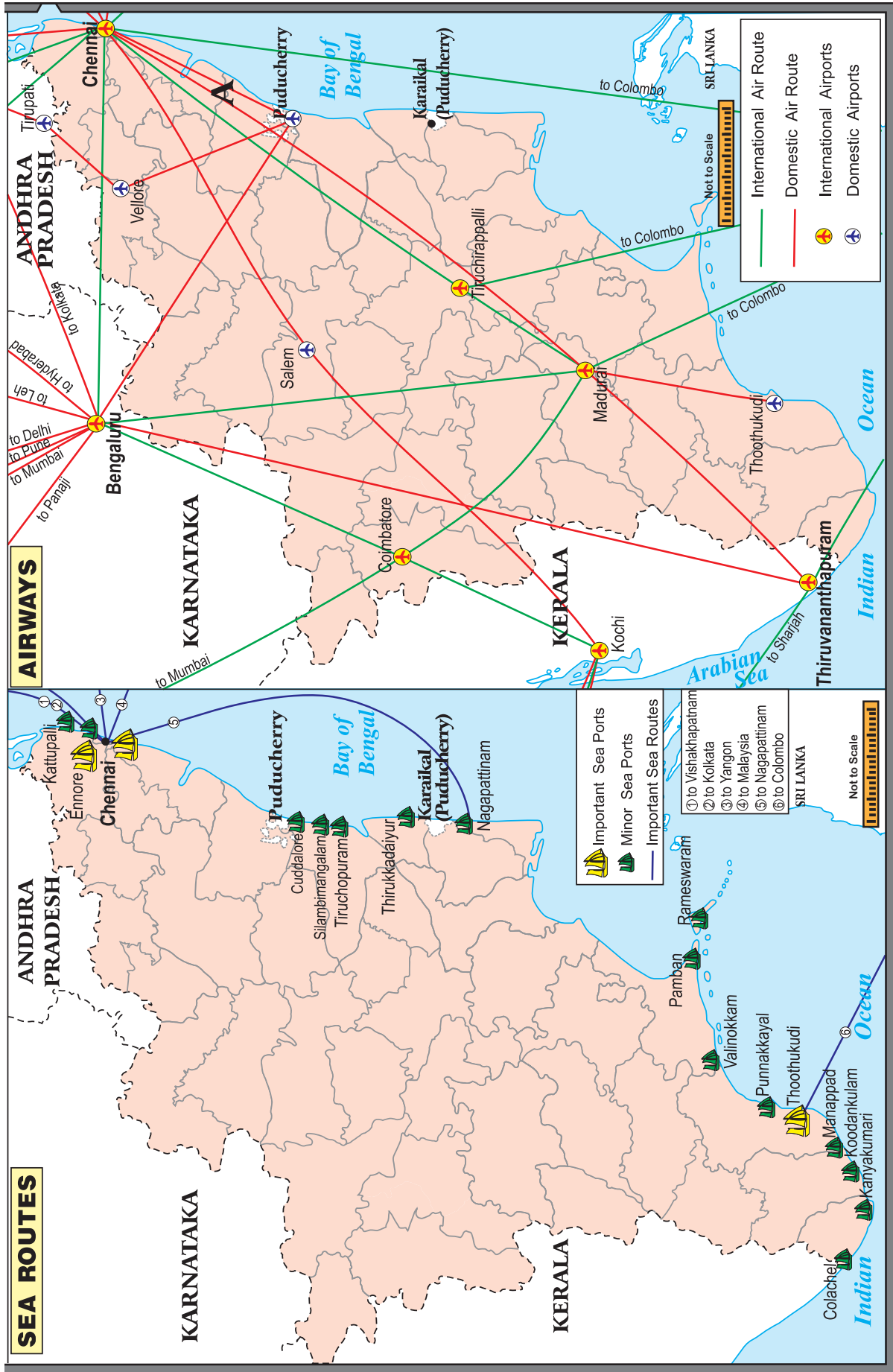
Postal Districts and Headquarters in Tamil Nadu

Zone /districts	Head quarters
Chennai	Chennai
Western	Coimbatore
Central	Thiruchirapalli
Southern	Madurai

TAMILNADU – TRANSPORT



TAMILNADU – TRANSPORT



7.13 Trade

Export and import are the two components of trade. Export means goods and services sold for foreign currency. Tamil Nadu contributes 12.2% to the country's exports. Import refers to goods and services are brought from overseas producers. Tamil Nadu imports many goods from outside. The difference between the values of export and import is called the balance of trade.

7.14 Imports of Tamil Nadu

Machineries like transport equipment, machine tools, non-electrical machinery, electrical machinery, pharmaceutical products, petroleum, fertilizers and newsprint are its major imports. The state contributes 10.94% to the country's trade through major ports.

Major Exports of Tamil Nadu

(i) Agricultural Products	tobacco, cereals, cotton, sugarcane, groundnut, spices and vegetables.
(ii) Leather Products	wallets, purses, pouches, handbags, belts, footwear and gloves
(iii) Gems and Jewellery	pearls, precious stones, gold jewellery, decorations and antiques
(iv) Chemicals and related products	paper, chemicals, rubber and glass.

The above discussion shows that Tamil Nadu is an important state of India in terms of size, population, resources and economic development. People in the state are well secured. The new schemes introduced by the state government periodically have enabled notable progress in various fields.

SUMMARY

- Human Geography is the branch of geography dealing with how human activity affects or is influenced by the nature.
- Tropical crops like paddy, millets, pulses, oilseeds and plantation crops of tea, coffee, cashew, rubber etc are the major crops of Tamil Nadu.



EXERCISE

I Choose the correct answer

- The delta which is known as Granary of South India is
 - Cauvery delta
 - Mahanadi delta
 - Godavari delta
 - Krishna delta



- Second staple food of the people of Tamil Nadu is
 - Pulses
 - Millets
 - Oilseeds
 - Rice
- A major hydro-electric power project of Tamil Nadu is
 - Mettur
 - Papansam
 - Sathanur
 - Thungabhadra

4. Number of major and minor ports in Tamil Nadu are
- a) 3 and 15 b) 4 and 15
c) 3 and 16 d) 4 and 15

II Fill in the blanks

1. Agriculture of Tamil Nadu constitutes _____ % of its economy.
2. Sathanur dam is constructed across the river _____.
3. _____ is the third largest airport in India after Mumbai and Delhi.
4. The difference between the value of exports and imports is called _____.

III Match the following

1. Bauxite – Salem
2. Gypsum – Servaroy hills
3. Iron ore – Coimbatore
4. Limestone – Tiruchirapalli

IV Questions 1-2 are assertion and reasoning type

1. **Assertion (A):** Coimbatore, Tiruppur, Erode, Karur and Salem region is called as The Textile Valley of Tamil Nadu.

Reason (R): They contribute a major share to the states economy through textiles.

- (a) Both (A) and (R) are true and (R) explains (A)
(b) Both (A) and (R) are true but, (R) does not explain (A)
(c) (A) is true but (R) is false
(d) (A) is false but (R) is true
2. **Assertion (A):** The Nilgiris is the least populated district of Tamil Nadu

Reason (R): It is located in the western most part of Tamil Nadu.

- (a) Both (A) and (R) are true and (R) explains (A)
(b) Both (A) and (R) are true but, (R) does not explain (A)
(c) (A) is true but (R) is false
(d) (A) is false but (R) is false

V Answer the following in brief

1. What are the cropping seasons of Tamil Nadu
2. Why is Coimbatore called the Manchester of South India?
3. Name the important multipurpose projects of Tamil Nadu.
4. What is MRTS?
5. List out the air ports and sea ports of Tamil Nadu.

VI Distinguish between the following

1. Food crops and non- food crops
2. Surface water and ground water

VII Give reasons for the following

1. Farmers switch over from inorganic to organic farming.
2. Cities are densely populated than the villages.

VIII Answer the following in a paragraph

1. Write about the plantation farming of Tamil Nadu.
2. Give an account on water resources of Tamil Nadu.
3. Bring out the mineral distribution in Tamil Nadu.
4. Explain the different modes of transport available in Tamil Nadu.

IX Map exercise

1. Mark the areas of major crops, minerals, dams, air ports and sea ports.



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1. <http://www.tn.gov.in/ta/TamilNadustate>
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A-Z GLOSSARY

Back waters: The part of a river which are stagnant and do not reach the sea as they are pushed by the current.

Distributary: A branch or outlet which leaves a main river and does not rejoin it, carrying its water to the sea or a lake.

Doab: A land between the two converging rivers.

Estuary: Mouth of a river where it enters the sea through a single channel with a hollow.

Perennial Rivers: The rivers which flow throughout the year and have permanent source of water.

Pass: A narrow gap through the mountains providing a route or passage way.

Peninsula: The land area covered with ocean on three sides.

Subcontinent: A large area of a continent that stands distinct from the rest of the continent and possesses almost all the characteristics of a continent.

Standard Time: The local time of central meridian of ones country.

Tributary: A river or stream which contributes its water to main river.

Climate: The weather conditions prevailing in an area in general or over a long period.

Meteorology: The branch of science concerned with the processes and phenomena of the atmosphere, especially as a means of forecasting the weather.

Season: Each of the four divisions of the year (spring, summer, autumn, and

winter) marked by particular weather patterns and daylight hou.

Weather: The state of the atmosphere at a particular place and time as regards heat, cloudiness, dryness, sunshine, wind, rain, etc.

Wildlife: Wild animals collectively; the native fauna (and sometimes flora) of a region.

Soil: Soil is the uppermost layer of the land surface composed of minerals, organic matter, living organisms and water

Khadar: Newer alluvium soil found in valley flooded almost every year

Bhangar: Older alluvium soil found in 30 mts above flood level

Soil erosion: Removal of top soil

Soil conservation: Prevention of soil from erosion and protecting its fertility.

Irrigation: Watering of plants through artificial means.

Multipurpose projects: Construction of dams across rivers aimed at many purposes

Agriculture: It is the process of producing food, feed, fibre and many other desired products by the cultivation of certain plants and the raising of domesticated plants

Biogas: The production of methane and carbon- di- oxide from plants and animal wastes.

Fossil fuel: Any naturally occurring carbon or hydrocarbon coal, oil and natural gas.

Ore: It is a deposit in the earth crust with one or more value minerals

Solar power: Heat radiation from the sun converted into electricity.

Thermal power station: An electricity generating plants which burns coal or oil.

Barter: A direct exchange of goods between any two parties.No money is involved in the trade.

Foreign exchange: The mechanism or process by which payments between any two places operating under different national currency systems are effected without passing of actual money or gold, etc.

Harbour: An extensive stretch of deep water near the seashore where vessels can anchor securely. It is used for exports and imports of goods.

Port: The commercial part of a harbour with the facility of loading and unloading of goods and space for the storage of cargo.

Bay: A broad inlet of the sea where the land curves inwards

Beach: A pebbly or sandy shore, especially by the sea between high- and low-water marks

Biogas: The production of methane and carbon- di- oxide from plants and animal wastes

Commercial crops: Crops which are cultivated to be sold to gain profit from sale.

Cyclone: A cyclone is a large scale air mass that rotates around a strong centre of low atmospheric pressure.

Dams: A barrier constructed to hold back water and raise its level, forming a reservoir used to generate electricity, supply water and other uses.

Delta: A triangular shaped alluvial tract formed at the mouth of a river.

Density of population: The average number of inhabitants living per sq km area

Drought: It is a natural disaster of below average precipitation in a given region resulting water shortage.

Drowning: death caused by being underwater and not being able to breath.

Endemism: The ecological state of a species being unique to a defined geographic location, such as an island, nation

Exports: Goods dispatched from one country to another.

Flood: A large amount of water that has spread from a river

Imports: Goods bought into a country from another country.

Land slide: sudden fall of mass of the rocks etc down side of the mountain

Literates: The people with the ability to read and write.

Leaching: It is a process in rainy seasons which all the soluble minerals are washed away by runoff water so the soil is infertile

Latitude: The imaginary parallel lines which run east to west on the globe.

Longitude: The imaginary vertical lines which run north to south on the globe.

Mangroves: Salt tolerant evergreen forest ecosystem found mainly in tropical and sub-tropical coastal and/or inter-tidal regions.

Manchester: An industrial city and metropolitan district in north-western England/items for the home made of cotton, linen, etc., such as sheets, pillowcases, or tablecloths.

Meteorology: The science of weather.

Mixed farming: It is a type of farming which involves both the growing of crops and the raising of livestock simultaneously in a land holding.

Monsoon: Season

Natural resources: Materials or substances occur in nature and are used for economic gain

Open Forest: Lands with forest cover having a canopy density between 10 to 40 percent.

Plantation agriculture: Well organized and managed farming with a single crop on a large scale. It is a capital intensive farming. Tea, coffee and rubber are the major plantation crops.

Plateau: An extensive elevated area of relatively a flat land.

Population: All the people living in a particular country, area, or place

Population census: Official enumeration of population along with economic and social attributes of a region at a specified interval.

Protected Forest(PF): An area notified under the provisions of the Indian Forest Act or other State Forest Acts, having limited degree of protection. In protected forest all activities are permitted unless prohibited.

Regions: An area, especially part of a country or the world having definable characteristics but not always fixed boundaries.

Reserved Forest (RF): An area constituted under the provisions of the Indian Forest Act or other State Forest Acts, having full degree of protection. In Reserved forests all activities are prohibited unless permitted.

Reservoirs: A large natural or artificial lake used as a source of water supply.

Sedimentary rock: A rock which has been formed by the consolidation of sediments.

Sex ratio: The number of females per 1000 males.

Stampede: a situation in which a large number of animals or people running in the same direction in an uncontrolled way causing injuries and deaths

Strait: A narrow passage of water connecting two seas or two other large areas of water.

Subsistence intensitive farming: It is a type of farming in which crops grown are consumed by the family with little surplus to sell.

Unclassed Forest: An area recorded as forest but not included in reserved or protected forest category.

UNESCO World Heritage Site: Representing the main ecosystem of the planet in which genetic resisources would be protected, and where research on the ecosystem as well as monitoring and training work could be carried.



CIVICS

