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### Chapter

# 1

## 1.0 The Context

The **DEPARTMENT OF ENVIRONMENT (DOE)** is the nodal department for dealing with environmental management of the state. The state has been endowed with multitude of natural resources, judicious management, which is essential for sustainable development in all sectors. Effective resources management calls for an in-depth assessment of their conditioning and trends. A cursory evaluation of the present status of environment and natural resources including land, soil, water, air and the life support systems like forests, rivers, coastal areas indicate that the health of such systems are threatened by serious level of degradation. Though different Government Department / Agencies are responsible for management of resources under their jurisdiction, information relating to the individual sector lie fragmented. To manage the environment in a holistic manner and to develop and environment friendly sustainable development perspective, it becomes necessary to identify the gaps in the present management of resource bases. Such intervention would be realistic only if there is strong database with data collected from primary / secondary sources, compiled and presented in the form of district environment profiles. Thus the Kaveri Research Lab, Department of Botany, C.N. College, Erode has been engaged for the preparation of such a report. This report will form the basis for developing **District level Environmental Management plans** that will spell out specific action programmes to be implemented by local / state institutions. This report provides a brief account of the manner in which the **District Environment Profile for Erode District** has been prepared and presented. To achieve certain degree of uniformity in the presentation of Environmental data in the districts, it is considered necessary that certain standardised formats are adopted for collection and presentation of the relevant data besides interpretations of the data thus collected. Accordingly the data compiled in the prescribed formats have been synthesised and presented in the following chapters.

### 1.1 Objectives of the Profile :

The Preparation of Environment Profile comprises of data collected of and prepared on all the environmental issues in the Erode District, which will be of good help to comprehend the Environmental status of the concerned district.

## 1.2 The Content :

Erode District Environment Profile gives a picturesque view of Geographical location, Administrative set up, Demographic detail, Resources, Infrastructures, Environmental Institutions, Observations and suggestions for the improvement of the Environmental status of the District.

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## Chapter

# 2

## 2.0 Background

### 2.1 History :-

Erode District has rich background of famous periyar E.V. Ramasamy and many other political leaders and great artist who hailed from this district. The excavations carried out in a tiny village called "Kodumanal" in Perundurai taluk of this district scientifically proved that Erode had wide contact with other parts of the world. It was evident that the people of this area had procured rare precious stones from Afghanistan, Jaipur , Srilanka etc, These articles excavated from this area revealed that they had been trading with Romans. Just like Indus valley civilization, the culture that flourished at "Kodumanal" on the bank of the river "Noyyal" were also commonly called as "Noyyal Civilization". During the sangam period the great philanthropist like 'Thoyan', 'Maran', 'Pazhayam' and 'Punnurai' lived in this district. The great poets like Nachinickininar, Pon mudiyan and Elankeerananar lived in this district. During the days of Chandra Gupta Mouriyan in 3rd century B.C., the jains came to a place of this district called 'Thingalur'. A great book in Tamil literature called 'Perunkathai' was composed by ' Vijayamangalam Koguelvir' in 7th century A.D., Tamil Poet constituted a Tamil sangam at Vijayamangalam of this district. Another historical book 'Kongumandala Sathagam' figures the district feature of this district. Eratter , Ganger , Cheran, Cholan, Pandiyan, Pasalar , Vijayanagar , Naickers of Madurai, Udaiyars of Mysore, Tippu, East India company and Queen Victoria ruled over this area at dif ferent ages of time. The places mentioned in Thevaram rhymes namely Thiruppani Kodumudi and Nana (Bhavani) belonged to this district. Arunagirinathar a great Tamil poet of 15th century composed devotional songs on the deities of Chennimalai, Bhavani, Sivanmalai, Kodumudi, Kangayam etc., Bhavani commonly called as "Mukkoodal". In 13th century A.D. Kalingarayan constructed a canal called kalingarayan canal for irrigation purposes over the Bhavani river . Another person Rajah of Umathur construct a dam over Bhavani at Kodiveri and

constructed Arakkankottai Thadappalli canal also.

In many places of this district we find "Hero - stones" which contains inscription learning information

about the slain hero. A great Hero of Indian freedom struggle "Theeran Chinnamalai" belonged to this

district. The Erode district is formed in 17-09-79 from Coimbatore district and function as an independent district.

2

### **Fairs and Festivals :-**

Important fairs and festivals organised in different parts of the district are Mariamman festival, Navarathri,

Sivanrathri, Weekly fair , Cattle fair , Panguni Uthiram, Thai Poosam, Brahmotsavam, Karthigai Deepam,

Deepavali, Pongal, Adi festival, Moharram, Christmas etc.

### **Languages :-**

Main languages spoken in the district are Tamil, Malayalam, Telugu and Kannada.

### **2.2. Geographical location of the District :-**

Erode district is located on the banks of River Cauvery. The river flows on the Northern and Eastern

part of the district. Erode District is surrounded by Karnataka state in North-West, Coimbatore district in the

west, Dindigul and Karur district in the south, Salem and Namakkal district in the East. This district lies

between 10.35' and 1.60' of North latitude and 76.49' and 77.85' of East longitude and 171.91 metres

above the sea level - The total geographical area of the district is about 8209 sq.km. with 7 taluks namely

Erode, Perundurai, Kangayam, Dharapuram, Bhavani, Gopi and Sathy. The district is divided in to 20

Blocks. Erode is the headquarters of this district.

### **2.3 Administrative Arrangement of the District :-**

Erode District administrative units consists of 7 taluks namely Erode, Perundurai, Kangayam, Dharapuram, Bhavani, Gopi, and Sathy with 20 Blocks, 531 village, 340 Panchayat villages, 61 Town

Panchayats and with 6 Municipalities namely Erode, Dharapuram, Bhavani, Gobi, Sathy and Bhavanisagar .

Recently Bhavanisagar is changed to Township from municipal grade. (Table No.:1)

### **2.4 Meterological information :-**

**C L I M A T E :-** The climate of Erode district is variable, while it is fairly pleasant during the south - west

monsoon in Dharapuram taluk, the climate is comparatively very hot in Gobi, Bhavani, Dharapuram and

parts of Erode. Hectic industrial activity adds to the heat, Erode town sweats under very hot spells during

summer . By the end of August, the south-west monsoon becomes moderate and during September there

S.No. Name of the Taluk Area (Sq. km)

1. Erode 731
2. Perundurai 828
3. Kangayam 792
4. Dharapuram 1486

- 5. Bhavani 1482
- 6. Gobi 742
- 7. Sathiyamangalam 2148
- Total 8209

3

are slight and variable winds. The rivers of the district get their freshness mainly from the south-west monsoon. The temperature of Erode District is 37.8°C as its maximum and minimum of 20.6°C. The monthly average rainfall in the district is worked out and it is 59.2mm. The average number of rainy days, mean, maximum temperature, mean minimum temperature, for the period of 1991-96 are given in Table No:2

### 2.5 Demographic Details :-

The growth of population over the past four decades and the essential characteristics of the population in terms of birth rate, death rate, infant mortality rate and literacy level are studied in the following sections.

Refer Table Nos. 3,4 and 5.

#### 2.5.1 Population :-

The population of Erode District has grown from 13, 92, 385 in 1951 to 23, 20, 263 in 1991. The

growth rate indicates that there has been a significant increase during 1971 - 1991 decade.

According to

the 1991 census of Erode District, the most thickly populated taluk is Erode in the district.

The details of

population growth are given in Table No : 3

#### 2.5.2 Trend in Birth / Death rate and Infant Mortality Rate :-

There has been steady decline in birth rate, death rate and infant mortality rate over the decades in

the district. The birth rate has come down from 40 in 1951 to 32 in 1991 (figures - per thousand) and the

death rate from 19 in 1951 to 1 in 1991 (figures - per thousand). The infant mortality rate has also gone

0

500000

1000000

1500000

2000000

2500000

1951 1961 1971 1981 1991

Years

Population

**Taluk Wise Population of Erode District**

4

0 1951 1961 1971 1981 1991

10

20

30

40

50

60

70

.....

**Trend in Birth / Death rate and Infant Mortality Rate in Erode**  
**Infant Mortality Rate**  
**Death Rate**  
**Birth Rate**

Population (per 1000)

down from 61 in 1951 to 49 in 1991 (figures - per thousand). The details of birth rate, death rate and infant

mortality over the past four decades are given in Table No : 4

**2.5.3 Literacy Level among population :**

The literacy level of Erode District according to figures available for 1996 is 47.75% with male literacy

level being more than the female literacy level. It is also observed while the male literacy level has grown

steadily from 51.76% in 1981 to 58.10% in 1996, there has been a steady increase of female literacy level

from 27.30% in 1991 to 36.95% in 1996. The information on literacy level are given in Table No.5. There

are about 21 colleges functioning in this district.

0 1981 1991 1996

500000

1000000

1500000

2000000

2500000

Population

Total

Population

Years

Literate

Population

Years

**Literacy Level Among Population in Erode District**

5

**3.1. Land Resources :-**

Resources of the District, their availability, use and environmental status is discussed in the following chapters.

**3.1.1 Agriculture and Horticulture :-**

**i) Land Utilisation : Geography and Physical Features.**

The total geographical area of the district was 8209 sq.km in 1995-96. Cropped area accounts for about 56.8% of the total area. Forestland covers about 28.3% of the total land. A significant portion

(25.1%) of the land falls under the category of 'non available for cultivation' and 'fallow lands'. The land

utilisation pattern in Erode District (Block-wise) is given in Table No :6

#### **ii) Trend in Production and Productivity of Important Crops:**

Cereals, pulses and oil seeds are observed that are the three important crops produced in the district.

The productivity pattern over the past 15 years indicates that the productivity of cereals, pulses and oil

seeds have gone up generally. The productivity of cereals has gone up from 1528 kg/ha to 2368 kg/ha

while the pulses gone up from 227 kg/ha to 1730 kg/ha. Another significant feature is the reduction in the

area under production for cereals and the increase in the area under production of pulses and oil seeds.

The reason may be due to Agricultural practices. The details on the productivity for the 15 years are given

in Table No : 7 .

#### **iii) Horticultural and Plantation Crops :**

The collection of information on horticulture and plantation crops reveals that 4205 hectares of land

are under fruit crops with the main crop is Banana and the annual production in the year 95-96 is 1862

tonnes. About 4756 hectares under vegetable crops with the yield of 2567.8 tonnes in the year 1995-96.

About 34250 hectares under plantation crops with the annual production of 31455.5 tonnes (1995-96).

The details on horticultural and plantation crops are given in Table No : 8

#### **iv) Consumption of Fertilizers and Pesticides :-**

The consumption of chemical fertilizer was 83, 353 metric tonnes in 1995-96, out of which about half

constitutes the nitrogenous fertilizer . There has also been an intensive use of Bio fertilizers about 88.38

### **Chapter**

# 3

## **3.0 Resources - Availability, use and Environmental Status**

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Metric tonnes. The usage of Urea is about 50, 882 metric tonnes, Among the pesticide, the liquid variety

was more popular with 1,15,780 litres and 1,60,297 kg of powder pesticides were used in 1995-96. The

details on consumption of fertilizers and pesticides are given in Table No : 9.

#### **v ) Trend in consumption of Fertilizer and Pesticide.**

The usage of chemical fertilizer fluctuates between 38,070 to 83,353 tonnes during the past 15 years

Generally there is an increase in the consumption of chemical fertilizer while the usage of biofertilizers also showed a steady increase. But at the same time the usage of pesticides decreased from the year 1993 to 1996. The trend in the consumption of fertilizer and pesticide over the past 15 years are given in

Table No : 10

**Consumption (in T)**

**Consumption (in T)**

**Years**

**Years**

**Consumption of Chemical Fertilizers**

**Consumption of Bio-Fertilizers**

7

#### **vi) Soil Type :-**

Red loam soil is the predominant soil type in this district accounting for 78.9% of the total area under agriculture. Sandy alluvium, Red sandy soil and others are the other type of soil found in the district. The

soil distribution pattern is given in Table No : 1

#### **vii) Soil Problem :-**

About 5.75% and 9.92% of the total land is affected by soil erosion and wind erosion respectively,

There is a negligible amount of degraded non - forest land. The details of the problem soils in Erode district

are given in Table No : 12

#### **viii) Status of Soil and Water Conservation Programmes :-**

Soil conservation works were being undertaken in 4170.467 hectares of cropping area. About 92 wells were constructed for irrigation in all the 20 Blocks. But there is no construction of percolation pond in Kangeyam, Vellakoil, Dharapuram and Kundadam Block. In 1995-96 there is a construction of check Dams in Chennimalai, Anthiyur and T.N. Palayam block. The necessary details in this regard are given in Table No : 13.

### **3.1.2 Forest Resources.**

#### **i) Forest Area :-**

There are 27 forest areas in Erode district constituting a total forest area of 2,40,895 hectares. 25 forest area fall under the Reserve forest with 2,33,090 hectares and 2 under Reserve land with 72.62 hectares. The details are given in Table No : 14.

79%

5%

15%

1%

**Redloam**

**Red Sandy Soil**

**Others**

**Sandy Alluvium**

**Soil Types in Erode District**

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#### **ii) Green Cover Classification of Forest :-**

The total forest area is about 2,40,895 hectares. Tropical semi evergreen and moist deciduous

forest are 58,212 and 4,381 hectares respectively. There is no littoral and swamp area in the district. Dry deciduous and dry thorn occupies 81,685 and 55,395 Ha. respectively. The tropical hill forest and dry tropical forest are 18,934 and 14,553 Ha. respectively. The details are given in Table No : 15

**iii) Trend in Per Capita Forest Area :-**

The forest area has not shown much fluctuations over the years. It has increased from 22,45,23.41 Ha. to 2,40,895 Ha. in 1996. The per capita forest area has however shown a declining trend from 0.158 Ha. to 0.094 Ha. in 1995 due to the steady increase in population. The details are given in Table No : 16.

**iv) Man made forest plantations :-**

The man made forest plantations have been restricted to the existing forest area in the district. About 13,805.20 Ha of man made forest areas are available in the district, which is predominantly occupied by the plantation of Eucalyptus, wattle, Teak, fuel wood, Sandal, Neem, Tamarind etc. Necessary details are given in Table No : 17

Regarding the production of forest produce in Erode district, there is a considerable reduction in the production of fuel wood in the reserve forest from 1598.45 Tonnes in 1980 to 335.0 Tonnes in 1996. The bamboo production is about 52 tonnes in 1993 and sandal wood is 388 tonnes in 1980. Similarly the all minor forest production is also reduced from 624.3 tonnes in 1980 to 42 tonnes in 1996. The details are given in Table No : 18

**v) Details of village Abutting forest Area :-**

The village abutting the forest area in Erode district is T.N. Palayam, Arachalur , Doddakumbai, Tamaraikkarai, Sholangur , Uppupallam and Kakkapur . The details regarding this are given in Table No : 19

**vi) Tribal Villages :-**

In Erode district the important tribal villages are Arachalur , Thingalur , Chennimalai, Anthiyur , Burgur , Ammappet, Alukuli, Kadambur , Thalavadi, Hasanur and Uthukuli. The major tribals living in these areas are Joshia Naicker, Kattu Naicker, Solagar, Oorali, Thombar etc. Details regarding this are given in Table No : 20

**vii) Forest Area diverted for Non - forestry purposes :-**

The major purpose for the diversion of forest area for non-forestry purposes is Electric transmission. About 34.386 Ha of lands are involved for the above purposes. Necessary information are given in Table No : 21

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**viii) Conservation of Biological Resources, Wildlife Census Rare/threatened species of flora and fauna :-**

Regarding the conservation of Biological resources all wild life and migratory birds are protected.

Sathyamangalam Reserve forest range is about 74,590 Ha. comes under biosphere reserve. There is one bird sanctuary at Vellode established in the year 1997 with an area of 77.185 Ha. One mini zoo with tiger, deer, Peacock and monkey is maintained by Erode Municipality at Erode V.O.C. park. Necessary information is furnished in Table No : 22, 23 and 24.

#### **Vascular Plants :-**

The rare flora available in the forest is **Combretum, Diospyros, Gymnopteris, Polypodium, Habenaria, Crotalaria** sps and **Indigofera**. There is no vulnerable forms in the forest. The endangered floras available are **Bulbophyllum, Gnetum, Angiopteris, Vernonia** etc., and extinct species are **Osmunda, Ranunculus, Impatiens** and **Lycopodium**.

#### **Animals :-**

Flora and Fauna, though independent, are interdependent in an Eco-system. If any one is disturbed the other also reciprocally gets disturbed. The important and rare forms available in the forest is flying and giant squirrel. The vulnerable forms are Liontail monkey, Niligiri langur and spiny mouse. The endangered forms are some dragon flies, butterflies, moths and beetles. The possible extinct forms found in the forest is Indian wolf, wild dog, jungle cat and Golden cat. There are about 20 migratory birds recorded in the vellode bird sanctuary. The important species are **Cormorant, Darter, Egret, Heron, Black Drongo, Spotted Dove, Black Winged kite, Coot, Jacana, Little snipe, Avocet** etc.

### **3.1.3 Mineral Resources**

Regarding the minerals, the district is with rich content, particularly in Dharapuram, Vellakoil and Kangeyam taluk. The important minerals are Feldspar, Quarts, Roughstone, Sand and Granite. Among these Quarts and Rough stone are present in 383.31.92 Ha with a production of 5859 lorry load and Quarts in 383.31.92 Ha with a production of 17530. The Granite production is about 1818.948 (Q.M) from the area of 89.36.00 Ha. (Refer Table No : 25)

### **3.2. Water Resources :-**

#### **3.2.1. Rivers, canals and Water ways :-**

The important rivers in Erode District are cauvery, Bhavani, Noyyal and Amaravathi. River Cauvery originates from Karnataka and it runs about 81 Km in the district with 3240 sq. km of area of the basin. River Bhavani originates from the Nilgiris of Western Ghats and runs about 61 km within the district and confluences with River Bhavani at Bhavani town. The Area of the basin in about 2593.6 sq.km. The River Noyyal originates from Coimbatore district and the length of the river in the district is 42 km. with an area of

the basin 2245 sq.km. The river Amaravathi originates from the Western Ghats and runs about 72 km. within the district and the area of the basin is 839 sq.km. The details are given in Table No : 26

### **3.2.2 River basins and their Catchment Areas.**

#### **i) Basin-wise status of the Ground water Availability :-**

C a u v e r y, Bhavani, Amaravathi and Noyyal are the basins in the district. Basin wise status of ground water availability in the district is given in Table No : 27. Available water spread area is given in Table No :

2 9 There are about 95 tanks in the district with water area of about 208.66 Ha. Maximum number of tanks

found in Thalavadi block and minimum in Modakkurichi, Chennimalai and T.N. Palayam Block.

#### **ii) Details of Dams and Reservoirs:-**

The main and important dams in the district is Bhavani sagar dam constructed in the year 1955,

Uppar dam in the year 1968, Kalingarayan canal in 1919 and Varattupallam in 1978. The details of dams,

reservoirs are given in Table No : 28.

#### **iii) Irrigation by different Sources :-**

The total cropped area is 3,68,294 Ha and the percentage of irrigated area to cropped area is

40.68%. The gross area irrigated by canals, tanks, wells and other sources are 91,787, 247 and 53,222

Ha. respectively. The details on irrigated area by dif ferent sources are given in Table No : 30

#### **iv) Incidence of Drought, Flood and Cyclone :-**

The very common and frequent natural calamity is 'Drought' only. In the last 10 years except 91-92

from 1985 to 1996 were found to have been drought years and drought relief work were also done under

special sanction from Govt. of India and those are temporary measures only. Drought is mainly due to

failure of monsoon. Out of 20 Blocks about 1 blocks are af fected in the year 1985-86, 1988-89, 1990-91,

1992-93 and 1995-96. Similarly the incidence of flood is recorded in the year 1986-87, 1990-91 and 1995-

96 in 4,7 and 5 blocks respectively. In Erode district there is no incidence of cyclone for the past 10 years

ie., from 1985-1996. The details are given in Table No : 31.

### **3.2.3. Fisheries production :-**

The Erode district has no coastal line. There has been Inland Fresh water area spread in 1726.09

Ha. There have been no estuaries and brakish water area and marine fishing villages in the district.

Though there is a reduction in fish production 1991-92, 1992-93 and 1994-95, the production increases in

the year 1995-96 and it is about 284.45 tonnes. The details are given in Table No : 32.

#### **i) General fish seed production :-**

The fish seed production increase from 27,600 in the year 1986 to 35,400 in 1995-96. But the

production has decreased in 1991-92. The details on fish and fish seed production are given in Table No

### **3.3 Heritage Resources :-**

#### **i) Protected and conserved monuments :-**

In Erode district, the Government has established a museum in Erode, which has a monument collection of Beeds, Burried pot, Inscription, Coins, Sculpture, Palm leaves and Terracotta pot. Apart from the

Government Museum, Mini museum are maintained by Sri Vasavi College, Erode, and Kalaimagal Kalvi

Nilayam, Erode. The details are given in Table No : 34.

#### **ii) Places of Tourist Attraction :-**

As far as the tourist attraction is concerned, Erode district has limited places like Kodumudi, Bannari,

Bhavanisagar , Bhavani, Sathy, Gobi, Anthiyur , Chennimalai and Sivanmalai. Kodumudi and Bhavani is a

historical pilgrim centre and it is famous for Lord Shiva temple. Chennimalai and Sivanmalai is famous for

Lord Muruga temple. Bannari, Sathy and Gobi is famous for Lord Mariamman temple.

Bhavanisagar dam

is a popular picnic spot with beautiful gardens. It is located 86 km from Erode. Only the domestic tourist visit

the above places during the festival time. There is no tourism department in the district.

The domestic tourist visit in the district is increasing slowly from 3.9 Lakhs to 6 lakhs in the year 1991,

1996 respectively. Government can establish a tourism department in this district to promote the tourist

activities. (Refer Table No : 35 and 36)

### **3.4 Energy Resources :-**

#### **i) Installed power projects :-**

In Erode district the major power project is from Hydel power . Bhavanisagar , Kuthiraikkal, Uratchikottai

and IVth Barrage are the hydel power stations which is having an installed capacity of 98 M.W. and 64 M.W.

during 1991, and 96 respectively. The power generation depends upon the availability of water . (Refer

Table No. 37)

#### **ii) Consumption of Electricity :-**

There were 4,49,798 electrical connections with a total consumption of 49,25,48,503 Kwh as on

1995-96. Domestic consumption has the maximum consumers accounting 42% of the total consumption,

followed by Industrial consumption of 40.8%. The category wise consumption of electricity is given in Ta b l e

No : 38.

#### **iii) Electrification of village :-**

Erode district has achieved 100% electrification since 1972. All 531 villages in the district are electrified.

The status in electrification of the energised pumps is given in Table No : 39.

#### **iv) Non conventional and Renewable Energy Sources Utilisation :-**

Biogas, wind energy and improved challah (about 346 Units) are the non - conventional energy

Utilised in the district. The details are given in Table No : 40

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## **4.1 Urbanisation.**

### **4.1.1 Urbanisation Pattern :-**

The proportion of urban population has increased rapidly during 1981-1996 and it is about 27%

during 1996. Among the urban areas, municipalities account for a greater share of Urban population, while compared to the other Urban areas. The urbanisation pattern of the district is given in Table 41.

### **4.1.2 Density of populaiton :**

The overall density of the district has increased from 251 persons/sq.km in 1981 to 299 persons/

s q . k m in 1996. The details on density are given in Table No.42.

### **4.1.3. Decadel Growth rate in Urban Centres :**

The population of the district has grown from 1.40 laksh in 1951 to 3.54 lakhs in 1996. The decadal

growth rate indicates that there is a consdierable growth in the municipalities of the district. Maximum

growth rate is recorded in Erode Municipality. The details of the decadal growth rate are given in Ta b l e

No.43. The decimal growth rate in total increased from 1.97% to 12.17% (Refer Table:44)

### **4.1.4 Urban Slum population :**

The data regarding the Slum population is not available. The town population in municipalities showed

a considerable increase and the same trend was observed in town panchayats also.

Necessary details are

given in Table No.45.

### **4.1.5. Trend in Urbanisation and Slums :**

Regarding the trend in Urbanisation, the percentage of Urban population increases from 22% in

1981 to 27.16% in 1996. But at the same time the percentage of slum population decreased from 3.64% in

1981 to 2.18% in 1996. The trend in Urbanisation and slum are given in Table No:46.

## **Chapter**

# **4**

## **4.0 Infrastructure**

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### **4.2. Infrastructure Services and Environmental Status :**

#### **4.2.1. Occupied Housing Units.**

The total occupied housing units of Urban and rural were 2,02,650 and 2,17,580 respectively in1981

and 1996. Piped water supply in inside and outside of houses in Urban areas was 88,749 and 95,288 in

1981 and 1996 respectively, and in rural areas it is 1,13,901 and 1,22,292 respectively in 1981 and 1996.

About 1,83,683 households are provided with toilet facility and 33,897 without toilet facility in 1996. (Refer

Table No.:47)

#### **4.2.2. Urban Services :**

Surface water and ground water are the major sources for protected water supply system for municipalities and the data is not available for town panchayats. The total estimated consumption of water in Erode municipality is about 16.5 MLD, in Sathy it is 3.25MLD, Bhavanisagar is about 0.5 MLD, Bhavani it is 4.81 MLD, Gobi it is 5.58 MLD and in Dharapuram it is about 4.83 MLD. Details on water supply services are given in Table No.48.

#### **4.2.3. Domestic Waste Water Generation and Treatment :**

The estimated sewage generation is 31.63 MLD in all the six municipalities in Erode district. The district does not have any treatment plant and hence there is no organised disposal sewage. The details regarding the estimated sewage generation in panchayat is not available. But most of the villages located in the river bank, discharge the untreated sewage into river systems and the rest of the villages discharged the sewage in the open land. The details is given in the table No.49.

0 1981 1991 1996

500000

1000000

1500000

2000000

2500000

Population

Years

Urban

Slum

Total

Trend in U rbanisation and Slums in Erode District

14

#### **4.2.4. Municipal solid waste Generation :**

The maximum solid waste generation and collection among the six municipality is observed in Erode Municipality and it is about 90 tonnes and 73 tonnes respectively. The collection ef ficiency is high in Erode Municipality (81%), Gobi (80%), Sathy (78%) and Bhavani (90%). The annual production of recycled manure is high in Erode, it is about 780 tonnes. (Refer Table : 50)

#### **4.2.5. Composition of Solid Waste :**

Compostable matter covers a small percentage but the other composition like wooden matter , Rubber , leather , plastics and metals covers a percentage of 10-20 in all the six municipalities. (Refer Table No.:51)

#### **4.2.6 Coverage of Problem Villages :**

Among the 531 villages in 20 Blocks, about 356 are problamatic villages. Among the 356 villages about 282 villages in the district, problems have been covered during VII-five-year and VIII-five year plan.

Necessary details are given in Table No.:52.

#### **4.2.7. Reported case of water borne disease :**

Gastro-enteritis, Cholera, Dysentery, Meningitis and Jaundice are the commonly reported water borne disease in the district. Incidence of gastro-enteritis has been very high during 1985 and 1990. The details on the reported cases of water borne disease are given in Table No.:53.

#### **4.2.8. Facilities under Indian System of Medicines :**

Allelopathy is the most commonly practised system of medicine in the district and facilities for medical education are also available. There are in addition, a few Siddha hospitals, other system of hospitals such as Ayurved, Unani and Homeopathy also available. (Refer Table No:54)

#### **4.2.9 Population below poverty line :**

Number of families below poverty line as on 1996 was 5,65,144 in Erode district. (Refer Table No : 55)

### **4.3. Transportation :**

Erode district is well connected by roads and railways. Major surface roads constitute National and state highways. The availability of granite and quarts in most part of the district make it is possible for good maintenance of roads.

#### **4.3.1 Development of Roads, Bridges :**

The district has 43 km. of National highways, 3793 km. of State highways, 306 km. of major district roads, 2623 km. of other district roads and 5053 km. of panchayat roads maintained by Urban Local bodies in the year 1991-96. Over and above, there are 47 major bridges and 5647 minor bridges and culverts in the district in the year 1996. Relevant information is provided in Table No : 56.

#### **4.3.2 Growth of Vehicle population :**

There has been a significant increase of two, three and four wheelers in the district for the past 5

15

years. The total number of two, three and four wheelers in 1996 is 84,091, 1,682, and 7,478 respectively.

The details on the growth of vehicle population are given in Table No : 57.

### **4.4 Industrial Development and Environmental status :**

#### **4.4.1. Number of Industries :**

The district has a fairly rich in mineral deposits. The district has many special and hazardous industries, which are classified as "Red", "orange" and "Green" categories by TNPCB. About 122 industries comes under 'Red category', among which 104 are small, 16 are meduim and 2 are large. In orange category the total number of industries is 172, among which 19 are small, 43 are meduim and 10 are large. The details are given in Table No : 58.

#### **4.4.2. Emission inventory of major industries :**

M/s Anbu Wattle has been identified with the highest Emission level in terms of SPM (142 mg / m<sup>3</sup>), No (2.2 mg / m<sup>3</sup>), while the emission rate of Co and Hc for the other industries are not available from the authorities.

(Refer Table No : 59)

#### **4.4.3. Air Pollution stressed area :**

The major air pollution sources in the district are tanneries, paper boards, distilleries, AV T G r o u p s

and foundaries. The air pollution stressed areas are B.P. Agraharam, Naripallam, Erode. Periapuliyur ,

Sathy and Pallagoundan Palayam (Refer Table No : 60)

#### **4.4.4 Ambient Air quality status :**

As for as the urban air quality is concerned the maximum average SPM and Nox values are recorded

in Industrial area (107 and 8.6) respectively. (Refer Table No : 61)

#### **4.4.5 Water quality :**

Under MINAR'S scheme, TNPCB is monitoring the quality of water from a sampling station in Bhavani,

Erode, Bhavanisagar and Ramanapudur . Most of the content of the water is within the standard value. The

details are given in Table No : 62

#### **4.4.6 Discharge of Industrial effluents :**

There are few Red category industries in the district generating solid, semi-solid and liquid wastes.

Generally these industries are disposing the waste in an unsatisfactory way which could have potential

environmental problems. The details regarding the discharge of Industrial effluents are available in

Table No : 63

#### **4.4.7 Noise levels :**

In Erode district the industrial area like Erode and Bhavani, noise level were 75 dBA which exceeded

the permissible levels of 65 dBA. The details are given in the Table No : 64.

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### **Chapter**

# **5**

## **5.0 Environmental Institution**

### **5.1 Environmental Education and Research Institutions :**

There has been 6 Environmental Education and Research Institution in the district - Four of this is

involved in educational activities and the other two are involved in awareness activities. The details are

given in Table No.65.

### **5.2. Environmental NGO's :**

There have been 20 NGOs dealing with environmental related issues in the district.

Environmental

awareness, Social Welfare, Environmental Education, AIDs, Training on Self-Employment, Rural development

and forest resource development are the activities undertaken by the NGO's. The details are given in

Table No.:66.

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### **Chapter**

# 6

## 6.0 Summary of Observations

The Key observations of the Environmental Profile of Erode District are briefed

below :

### Demographic Details :

1. The Population Growth Rate in Erode District has been in an increase at about 2.40% per annum (Between 1981-1991).
2. The Literacy rate in Erode District has marginally increased and it is encouraging to note that the female literacy rate has significantly increased for the past 20 years.

### Land Resources :

1. Utilisation of land area in Erode district is upto 56.8% only.
2. There is a considerable increase in the consumption of biofertilizers. The use of Chemical fertilizers and pesticides has increase considerably.
3. The trend in the production of total cereals is more when compared to pulses and oilseeds.
4. Red loam soil 78.9%, Sandy Alluvium 4.7% Red sandy soil 15.1% and other 1.3% are the soil types of the Erode District.
5. Generally there have been about 92 new construction of wells, 35 percolation ponds and 3 checkdams.

### Forest Resources :

1. The extent of Forest area is about 240895 Ha. The different forest types are tropical semi evergreen, moist deciduous, dry deciduous, dry thorn, tropical hill forest and dry tropical forest.
2. The Vellode Bird Sanctuary recorded about 20 migratory birds.
3. The man made forest plantations have been restricted to the existing forest area in the District.
4. The main sources of Irrigation in the district are canals, tanks, wells and other sources. On an average 18 about 40% of the total cropped area is irrigated from these sources.
5. There is a considerable increase in the fish seed production for the part 10 years.
6. There have been 7 tourist places in the district. Only domestic tourist visited the district and no record of foreign tourist visit.
7. There has been a marginal improvement in the power generation sector . Non conventional and renewable energy source of utilisation is not very much identified. All the villages in the district is electrified.

### Urbanisation :

1. Urbanisation process in Erode District has been taking place at a higher rate. However , certain essential

needs of Urban areas like drinking water , public convenience, drainage, roads, health centre etc.,

have not been increased, keeping the pace with the process of Urbanisation.

2. The slum population in the district decreased considerably due to several poverty alleviation programmes

undertaken by Government.

3. Gastroenteritis, Dysentery and Meningitis are the most commonly reported water borne, disease.

### **Transportation :**

1. There has been a significant growth of two, three and four wheelers in the district over the 10 years.

Thus resulting in an increased quantity in the emission of suspended air particles.

### **Industrial Development :**

1. The Red and orange categories of hazardous industries are identified by TNPCB.

However , orange

category industries are more in the district.

### **Environmental Institution :**

1. There is only 6 environment education institute in the district.

2. There were 20 Environmental NGOs., who may be involved in environmental protection for the district.

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