

## 8.25 TAMIL NADU

### 8.25.1 Introduction

Tamil Nadu, the southernmost State of India has a geographic area of 13 million ha, which constitutes 3.96 % of the area of the country. It lies between lat 8°05' and 13°35' N and long 76°15' and 80°20' E. The State can be divided into four major physiographic regions namely, Coastal Plain, Eastern Ghats, Central Plateau and higher elevation mountains. The main rivers flowing through the State are Cauvery, Pennaiyar and Vaigai.

The south-west monsoon feeds the plateau and the retreating north-east monsoon brings rain to the east coast. The temperature in State ranges from 2°C in the hills to 45°C in other areas. The average rainfall ranges from 925 to 1,170 mm.

The population of the State is 62.40 million (*Census 2001*), which constitute 6.07% of the country's population. The rural population is 56% and urban 44%. Population density is 480 persons per km<sup>2</sup>. The Scheduled Tribes constitute only 1% of the State's population. The livestock population of the State is 24.94 million (*Livestock Census 2003*), which has marginally decreased since the census of 1992. Land use pattern of the State is given in Table 8.25a.

### 8.25.2 Forest Resources

The recorded forests area is 22,877 km<sup>2</sup>, which constitutes 17.59 % of the geographic area of the State. Reserved Forests comprise 84.75 %, Protected Forests, 9.54 % and Unclassed Forests, 5.71 %.

Major forest types occurring in the State are Tropical

Wet Evergreen, Tropical Semi-Evergreen, Tropical Moist Deciduous, Littoral and Swamp, Tropical Dry Deciduous, Tropical Thorn, Sub-Tropical Broadleaved and Montane Wet Temperate forests.

### 8.25.3 Protected Areas

The State has 5 National Parks and 19 Wildlife Sanctuaries spread over 0.28 million ha, which constitutes 2.19% of the geographic area. Kalakad Mundanthurai Tiger Reserve and Mudumalai Sanctuary fall in the State. Mukruti National Park, which is located in Nilgiris, is famous for Nilgiri Tahr. The State has two Biosphere Reserves namely Gulf of Mannar, and Nilgiri. Nilgiri Biosphere Reserve extends to Karnataka and Kerala.

### 8.25.4 Joint Forest Management

The resolution for involving local communities in the management of forests was issued by the Government in 1997 which coincided with the launch of JBIC Project. There are 1,367 JFM Committees managing about 0.48 million ha of forest area as on March 2005, which is about 21% of the forest area of the State. More than 0.24 million families are involved in this programme, of which around 10,000 families belong to the Scheduled Tribes. Water harvesting structures form an important component of the JFM programme.

*Source: Proceedings of the National Workshop on JFM, MoEF, 2005.*

**Table 8.25a: Land use pattern**

| Land Use                                   | Area in '000 ha | Percentage |
|--|-----------------|------------|
| Total geographical area                    | 13,006          |            |
| Reporting area for land utilization        | 12,991          | 100.00     |
| Forests                                    | 2,134           | 16.43      |
| Not available for cultivation              | 2,462           | 18.95      |
| Permanent pastures and other grazing lands | 123             | 0.95       |
| Land under misc. tree crops & groves       | 255             | 1.96       |
| Culturable wasteland                       | 352             | 2.71       |
| Fallow lands other than current fallows    | 1,228           | 9.45       |
| Current Fallows                            | 1,134           | 8.73       |
| Net area sown                              | 5,303           | 40.82      |

*Source: Land Use Statistics, Ministry of Agriculture, GOI, 2005.*

### 8.25.5 Forest Cover

The forest cover of the State, based on satellite data of December 2004 to February 2005, is 23,044 km<sup>2</sup>, which is 17.72 % of the geographic area. Very dense forest accounts for 2,650 km<sup>2</sup>, moderately dense forest is 9,790 km<sup>2</sup>, and open forest 10,604 km<sup>2</sup>. The forest cover of the State is shown in Fig 8.25.

An increase of 41 km<sup>2</sup> of forest cover has been assessed in the present assessment as compared to the previous assessment (based on satellite data of November-December 2002).

The change matrix, given in Table 8.25b reveals that there has been an increase of 2 km<sup>2</sup> in moderately dense forest, and an increase of 39 km<sup>2</sup> in open forest. The scrub has decreased by 33 km<sup>2</sup>.

As observed by the FSI officials during field verification, plantations of miscellaneous spp. (*Azadirachta*

*indica*, *Pongamia pinnata*, *Terminalia spp.*, *Bamboo spp.*, *Hardwickia binata*, *Emblica officinalis*, *Casurina equisetifolia*, *Sygium cumini* etc) in the districts of Tiruchirapalli, Thiruvannamalai, and Villupuram has been responsible for improvement of forest cover. Further,

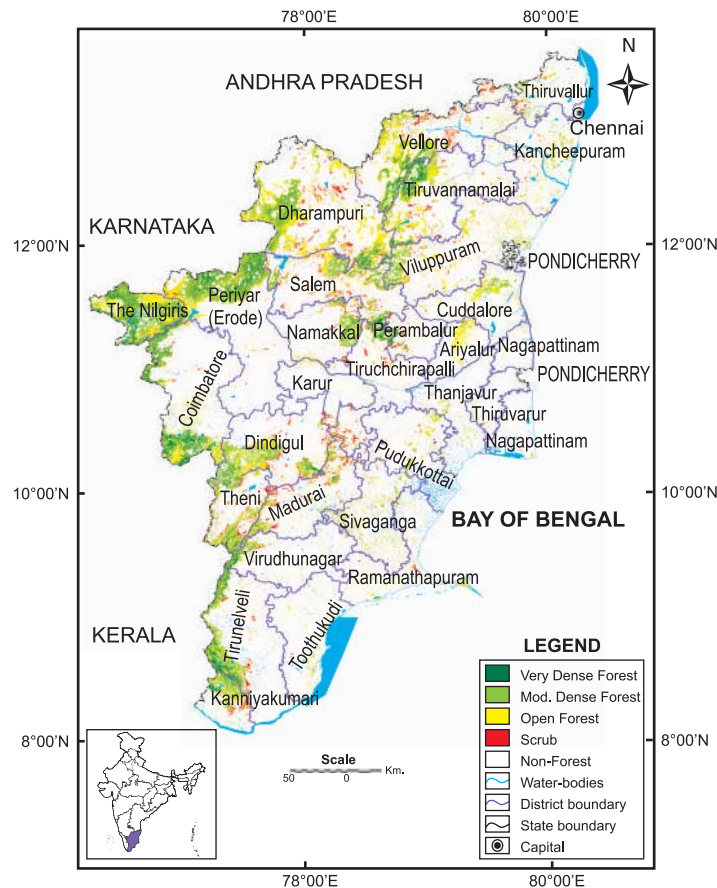
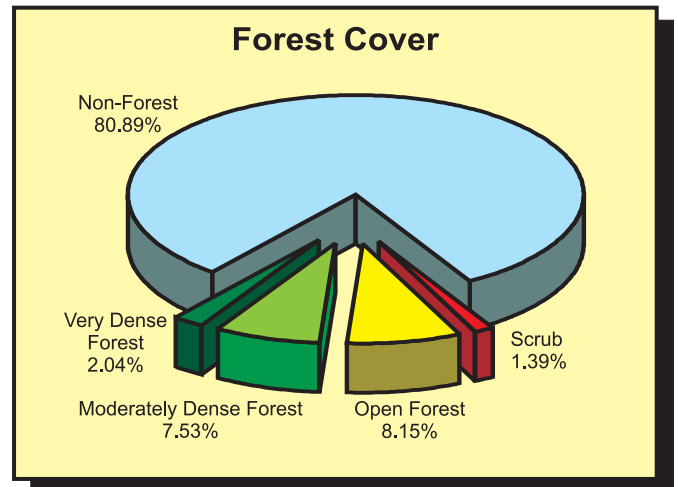


Fig. 8.25 : Forest Cover Map of Tamil Nadu

plantations of Eucalyptus and cashew in the districts of Ariyalur, Dharmapuri, and Sivaganga have also improved the forest cover. Decrease in forest cover has been noticed in Cuddalore district due to felling of casuarina plantation. In Sivaganga, felling of miscellaneous plantation has also caused some decrease in forest cover.

The district wise details of very dense forest, moderately dense forest, open forest and scrub, along with the changes compared to 2003 assessment, have been provided in Table 8.25c.

**Table 8.25b: Forest cover change matrix**

(area in km<sup>2</sup>)

| 2003 Assessment (Data of Nov. - Dec. 2002) | 2005 Assessment<br>(Data of Dec. 2004 & Jan. - Feb. 2005) |              |               |              |                | Total 2003     |
|--|---|--------------|---------------|--------------|----------------|----------------|
|  | VDF   | MDF          | OF            | Scrub        | NF             |                |
| Very Dense Forest                          | 2,650   | 0            | 0             | 0            | 0              | 2,650          |
| Moderately Dense Forest                    | 0   | 9,774        | 0             | 0            | 14             | 9,788          |
| Open Forest                                | 0   | 9            | 10,533        | 0            | 23             | 10,565         |
| Scrub                                      | 0   | 1            | 32            | 1,808        | 0              | 1,841          |
| Non Forest                                 | 0   | 6            | 39            | 0            | 105,169        | 105,214        |
| <b>Total 2005</b>                          | <b>2,650</b>  | <b>9,790</b> | <b>10,604</b> | <b>1,808</b> | <b>105,206</b> | <b>130,058</b> |
| Net Change                                 | 0   | 2            | 39            | -33          | -8             |                |

**Table 8.25c: District-wise forest cover**

Number of Districts: 30

(area in km<sup>2</sup>)

| District                   | Geographic area | 2005 Assessment   |                   |             |       | Percent of G.A. | Change | Scrub |
|----------------------------|-----------------|-------------------|-------------------|-------------|-------|-----------------|--------|-------|
|                            |                 | Very dense forest | Mod. dense forest | Open forest | Total |                 |        |       |
| Ariyalur                   | 1,947           | 0                 | 31                | 263         | 294   | 15.10           | 2      | 1     |
| Chennai                    | 144             | 0                 | 3                 | 3           | 6     | 4.17            | 0      | 0     |
| Coimbatore <sup>H</sup>    | 7,469           | 424               | 815               | 567         | 1,806 | 24.18           | 0      | 25    |
| Cuddalore                  | 3,706           | 0                 | 179               | 247         | 426   | 11.49           | -2     | 7     |
| Dharmapuri <sup>T</sup>    | 9,622           | 193               | 1,052             | 1,710       | 2,955 | 30.71           | 5      | 227   |
| Dindigul                   | 5,580           | 249               | 620               | 396         | 1,265 | 22.67           | 0      | 150   |
| Erode                      | 8,209           | 378               | 1,174             | 678         | 2,230 | 27.17           | 0      | 40    |
| Kancheepuram               | 4,474           | 0                 | 107               | 272         | 379   | 8.47            | -1     | 25    |
| Kanniyakumari <sup>H</sup> | 1,684           | 78                | 382               | 206         | 666   | 39.55           | 0      | 63    |
| Karur                      | 2,901           | 0                 | 14                | 74          | 88    | 3.03            | 0      | 25    |
| Madurai <sup>H</sup>       | 4,277           | 31                | 196               | 317         | 544   | 12.72           | 0      | 204   |
| Nagapattinam               | 2,140           | 0                 | 20                | 41          | 61    | 2.85            | -3     | 1     |
| Namakkal <sup>T</sup>      | 3,413           | 40                | 294               | 209         | 543   | 15.91           | 0      | 68    |
| Perambalur <sup>T</sup>    | 1,748           | 9                 | 57                | 75          | 141   | 8.07            | 0      | 19    |
| Pudukkottai                | 4,651           | 0                 | 99                | 142         | 241   | 5.18            | -1     | 11    |
| Ramanathapuram             | 4,232           | 0                 | 103               | 136         | 239   | 5.65            | 0      | 15    |
| Salem <sup>T</sup>         | 5,235           | 67                | 529               | 551         | 1,147 | 21.91           | 0      | 189   |

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(area in km<sup>2</sup>)

| District                      | Geographic area | 2005 Assessment   |                   |               |               | Percent of G.A. | Change    | Scrub        |
|-------------------------------|-----------------|-------------------|-------------------|---------------|---------------|-----------------|-----------|--------------|
|                               |                 | Very dense forest | Mod. dense forest | Open forest   | Total         |                 |           |              |
| Sivaganga                     | 4,086           | 0                 | 180               | 297           | 477           | 11.67           | 1         | 19           |
| Thanjavur                     | 3,415           | 0                 | 63                | 75            | 138           | 4.04            | 0         | 4            |
| The Nilgiris <sup>H</sup>     | 2,549           | 404               | 878               | 789           | 2,071         | 81.25           | 0         | 2            |
| Theni                         | 2,764           | 70                | 423               | 362           | 855           | 30.93           | 2         | 134          |
| Thiruvallur                   | 3,413           | 0                 | 62                | 169           | 231           | 6.77            | 2         | 96           |
| Thiruvarur                    | 2,716           | 0                 | 13                | 17            | 30            | 1.10            | 0         | 1            |
| Tiruchchirapalli <sup>T</sup> | 4,511           | 69                | 160               | 205           | 434           | 9.62            | 28        | 94           |
| Tirunelveli <sup>H</sup>      | 6,810           | 227               | 622               | 293           | 1,142         | 16.77           | 0         | 86           |
| Tiruvannamalai <sup>T</sup>   | 6,191           | 165               | 483               | 742           | 1,390         | 22.45           | 3         | 57           |
| Toothukudi                    | 4,621           | 0                 | 50                | 119           | 169           | 3.66            | -2        | 22           |
| Vellore                       | 6,077           | 165               | 614               | 940           | 1,719         | 28.29           | 0         | 173          |
| Villupuram                    | 7,190           | 27                | 430               | 576           | 1,033         | 14.37           | 7         | 38           |
| Virudhunagar                  | 4,283           | 54                | 137               | 133           | 324           | 7.56            | 0         | 12           |
| <b>Total</b>                  | <b>130,058</b>  | <b>2,650</b>      | <b>9,790</b>      | <b>10,604</b> | <b>23,044</b> | <b>17.72</b>    | <b>41</b> | <b>1,808</b> |

### 8.25.6 Tree Cover

Tree cover of Tamil Nadu has been estimated following a sampling based approach. A separate exercise was carried out where high resolution satellite data (5.8m) has been used for identification of tree patches for field inventory. Field

inventory has been carried out on 1,088 sample plots spread over 8 districts of the State between 2002-06 and the estimated tree cover in the State is 5,621 km<sup>2</sup>.

The forest and tree cover of the State is presented in the Table 8.25d.

**Table 8.25d: Forest & tree cover**

(area in km<sup>2</sup>)

| Category                       | Area          | % of Geographical Area |
|--------------------------------|---------------|------------------------|
| Tree Cover                     | 5621          | 4.32                   |
| Forest Cover                   | 23,044        | 17.72                  |
| <b>Forest &amp; Tree Cover</b> | <b>28,665</b> | <b>22.04</b>           |