

## 7.13 KARNATAKA

## 7.13.1 Introduction

Karnataka, one of the southern States of the country, has a geographical area of 191,791 km<sup>2</sup> constituting 5.83% of the total area of the country. It lies between latitude 11°30' to 18°25' N and longitude 74°10' to 78°35' E. It has a coastline of approximately 400 km. The State can be divided into two distinct physiographic regions viz. the 'Maland' or hilly region comprising of Western Ghats and the 'Maidan' or the plain region comprising the inland plateau of varying heights. The major rivers of the State are Cauvery, Tungbhadra and Krishna, which water this predominantly agrarian state. Land use pattern of the State is given in Table 7.13.1.

The annual rainfall in the State varies from 2,000 - 3,200 mm in the Western Ghats and between 400-500 mm in the northern and northeastern parts. Average summer and winter temperature varies from 26°C to 35°C and 14°C to 25°C respectively.

As per Census 2001, the total population of the State is 52.85 million of which the rural population constituted 66.01%. The population density is 276 persons per km<sup>2</sup>. The Scheduled Tribes constitutes 6.60% of the population. The projected population of the State is 58.18 million (as projected by the Office of RGI for 2009) which constitutes 5.02% of the country's population. The livestock population as per Livestock Census 2003 is 25.60 million, which has decreased by 13% since the Census of 1992.

Table 7.13.1: Land use pattern

Land Use	Area in '000 ha	Percentage
Total geographical area	19,179	
Reporting area for land utilization	19,050	100.00
Forests	3,072	16.13
Not available for cultivation	2,151	11.29
Permanent pastures and other grazing lands	934	4.90
Land under misc. tree crops & groves	292	1.53
Culturable wasteland	416	2.18
Fallow lands other than current fallows	515	2.70
Current fallows	1,565	8.22
Net area sown	10,105	53.04

Source: Land Use Statistics, Ministry of Agriculture, GOI, 2006.

## 7.13.2 Recorded Forest Area

The recorded forest area of the State is 38,284 km<sup>2</sup>. Reserved Forests constitute 74.94%, Protected Forests 10.27% and Unclassed Forests 14.79% of the total forest area. About two-fifth of the State's geographical area is under recorded forests.

## 7.13.3 Protected Areas

Karnataka has 5 National Parks and 21 Wildlife Sanctuaries covering an area of 2,472 km<sup>2</sup> and 3,879 km<sup>2</sup> respectively. Thus, a total of 6,351 km<sup>2</sup> area constituting 3.31% of the State's geographical area, is protected area network. Karnataka has 2 Tiger Reserves, Bandipur Nagarhole (extension) and Bhadra, covering an area of 1,366 km<sup>2</sup>. It shares Nilgiri Biosphere Reserve (area 5,520 km<sup>2</sup>) with Tamil Nadu and Kerala.

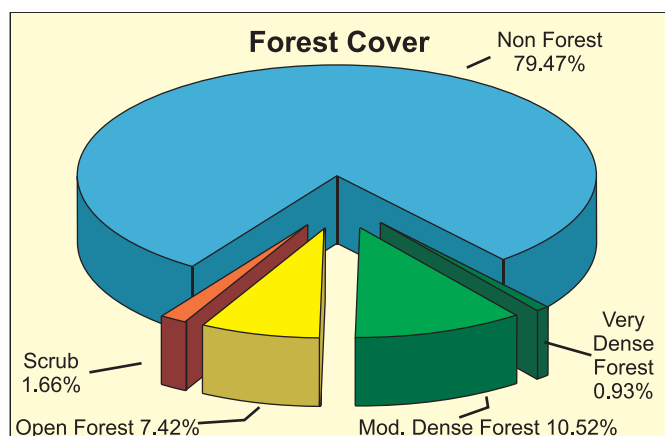
## 7.13.4 Joint Forest Management

Started in 1993, the Joint Forest Management endeavor in the State has about 8.37% of the forest area under it. There are 3,887 JFM committees managing 0.32 million ha of forest area. About 0.19 million families are involved in JFM, of which 24,705 families belong to Scheduled Tribes.

Source: MoEF, 2005.

## 7.13.5 Forest Cover

The forest cover in the State, based on



interpretation of satellite data of Dec 2006 - Mar 2007, is 36,190 km<sup>2</sup>, which is 18.87% of the State's geographical area. In terms of forest canopy density classes, the State has 1,777 km<sup>2</sup> very dense forest, 20,181 km<sup>2</sup> moderately dense forest and 14,232 km<sup>2</sup> open forest. The distribution of forest cover of the State is shown in Fig. 7.13.

Comparison of the current forest cover (satellite data of Dec 2006 - Mar 2007) with the previous assessment (satellite data of Nov - Dec 2004 & Feb 2005) shows a loss of 10 km<sup>2</sup> of forest cover.

The change matrix, given in Table 7.13.2, reveals that there has been an increase of 5 km<sup>2</sup> in the very dense forest and a decrease of 15 km<sup>2</sup> in the moderately dense forest.

On the basis of ground truthing by the officials of FSI, main reason for forest cover increase in districts of Belgaum, Dakshin Kannad, Chikmagalur and Kodagu is plantation. The forest cover decreased in districts of Shimoga, Udipi and Raichur due to harvesting of plantations.

District wise forest cover in different canopy density classes and scrub along with the changes compared to 2005 assessment is given in the Table 7.13.3.

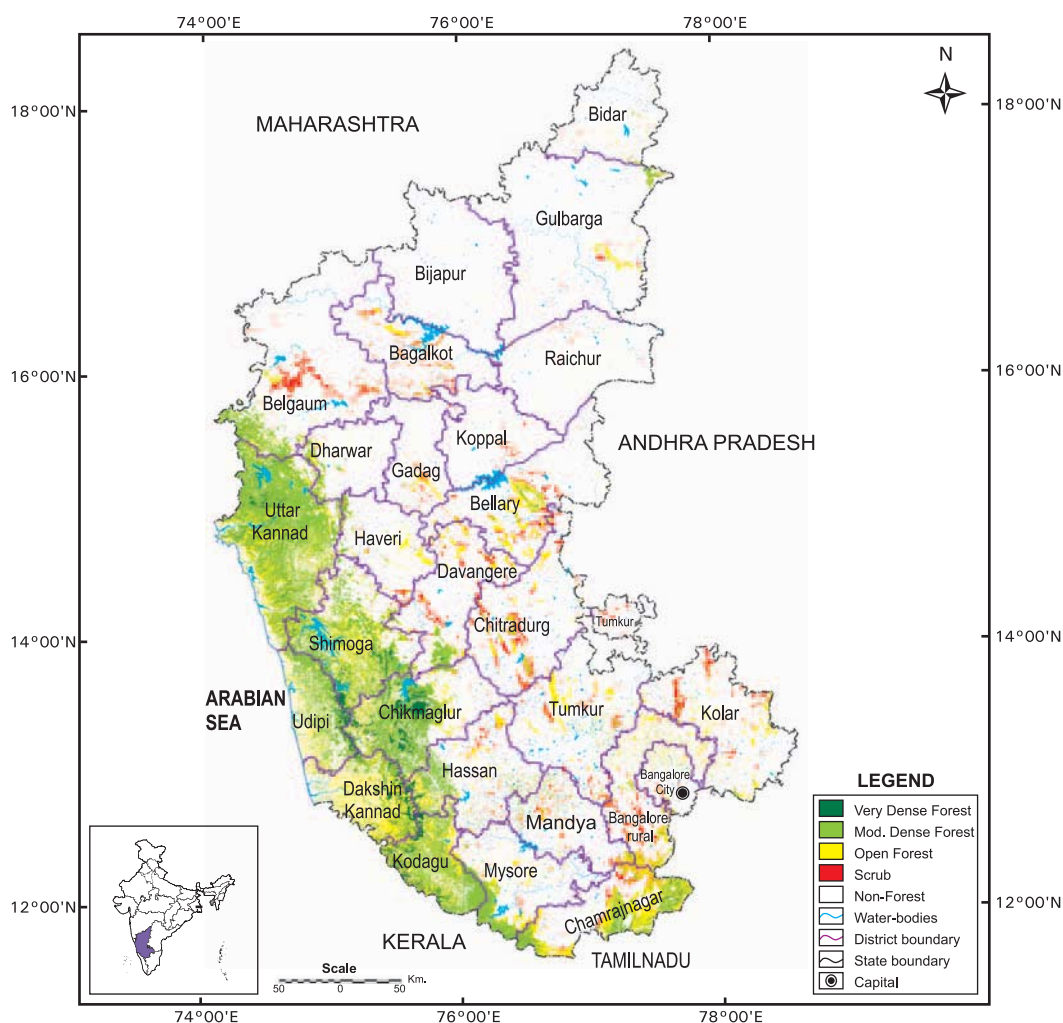


Fig 7.13 : Forest cover map of Karnataka

**Table 7.13.2: Forest cover change matrix**

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

2005 Assessment (Data of Nov - Dec 2004 & Feb 2005)	2007 (Data of Dec 2006 - Mar 2007)					Total of 2005
	VDF	MDF	OF	Scrub	NF	
Very Dense Forest	1,772	0	0	0	0	1,772
Moderately Dense Forest	5	20,178	4	0	9	20,196
Open Forest	0	0	14,222	0	10	14,232
Scrub	0	0	0	3,168	5	3,173
Non-Forest	0	3	6	8	152,401	152,418
<b>Total of 2007</b>	<b>1,777</b>	<b>20,181</b>	<b>14,232</b>	<b>3,176</b>	<b>152,425</b>	<b>191,791</b>
Net Change	5	-15	0	3	7	

**Table 7.13.3: District-wise forest cover in 2007**

Number of districts: 27

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

District	Geographical area	Very dense forest	Mod. dense forest	Open forest	Total	% of G.A.	Change*	Scrub
Bagalkot	6,575	0	11	189	200	3.04	-1	233
Bangalore Rural	5,815	6	133	671	810	13.93	-1	253
Bangalore City	2,190	0	39	110	149	6.80	0	30
Belgaum <sup>H</sup>	13,415	17	757	318	1,092	8.14	1	467
Bellary	8,450	0	110	662	772	9.14	0	253
Bidar	5,448	0	18	36	54	0.99	0	12
Bijapur	10,494	0	0	12	12	0.11	0	0
Chamrajnagar	5,101	45	1,043	1,548	2,636	51.68	0	179
Chikmagalur <sup>TH</sup>	7,201	587	2,428	666	3,681	51.12	0	17
Chitradurg	8,440	0	56	362	418	4.95	0	435
Dakshin Kannad <sup>TH</sup>	4,560	253	1,009	1,598	2,860	62.72	2	0
Davangere	5,924	4	339	399	742	12.53	-1	269
Dharwar	4,260	0	232	151	383	8.99	0	6
Gadag	4,656	0	0	123	123	2.64	0	64
Gulbarga	16,224	0	87	209	296	1.82	0	46
Hassan	6,814	67	752	511	1,330	19.52	1	91
Haveri	4,823	0	154	245	399	8.27	-2	53
Kodagu <sup>TH</sup>	4,102	246	2,142	951	3,339	81.40	1	0
Kolar	8,223	0	59	449	508	6.18	-2	283
Koppal	7,189	0	1	13	14	0.19	0	53
Mandya	4,961	1	98	209	308	6.21	0	135
Mysore <sup>T</sup>	6,854	4	648	417	1,069	15.60	0	38
Raichur	6,827	0	2	23	25	0.37	-1	16
Shimoga <sup>H</sup>	8,477	205	2,809	1,394	4,408	52.00	-3	23
Tumkur	10,597	0	62	490	552	5.21	-1	219
Udipi <sup>I</sup>	3,880	158	1,415	617	2,190	53.87	-2	0
Uttar Kannad <sup>H</sup>	10,291	184	5,777	1,859	7,820	75.99	-1	1
<b>Total</b>	<b>191,791</b>	<b>1,777</b>	<b>20,181</b>	<b>14,232</b>	<b>36,190</b>	<b>18.87</b>	<b>-10</b>	<b>3,176</b>

\* Change compared to 2005 assessment (revised).

### 7.13.6 Altitude Zone wise Forest Cover

Forest cover of the State in different altitude zones is given in Table 7.13.4.

**Table 7.13.4: Altitude zone wise forest cover**

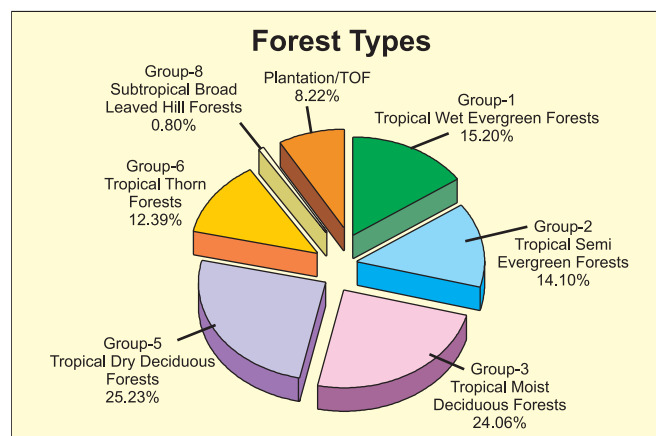
(area in km<sup>2</sup>)

Altitude Zone	VDF	MDF	OF	Total
0-500m	486	5,232	3,789	9,507
500-1000m	1,101	13,216	9,721	24,038
1000-2000m	190	1,733	722	2,645
<b>Total</b>	<b>1,777</b>	<b>20,181</b>	<b>14,232</b>	<b>36,190</b>

(based on SRTM Digital Elevation Model)

### 7.13.7 Forest Cover in different Forest Types

The State has 19 different forest types as per Champion & Seth's classification system (1968) belonging to 6 type groups viz. Tropical Wet Evergreen, Tropical Semi Evergreen, Tropical Moist Deciduous, Tropical Dry Deciduous and Tropical Thorn, Subtropical Broadleaved Hill Forests. Distribution of forest cover in different forest type groups found in the State is given in the pie diagram.



### 7.13.8 Tree Cover

Tree cover of the State has been estimated using sample data of TOF inventory collected over a period of six years i.e. 2002-08. The estimated tree cover in the State is 5,683 km<sup>2</sup> which is 2.96 % of the geographical area of the State. Twelve districts of the

State (Bagalkot, Bangalore Rural, Bellary, Bidar, Bijapur, Gadag, Hassan, Kodagu, Mysore, Raichur, Shimoga and Tumkur) have been inventoried. The forest and tree cover of the State is presented in the Table 7.13.5.

**Table 7.13.5: Forest & tree cover**

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

Category	Area	% of Geographical area
Tree Cover	5,683	2.96
Forest Cover	36,190	18.87
<b>Forest &amp; Tree Cover</b>	<b>41,873</b>	<b>21.83</b>