

## 7.5 CHHATTISGARH

### 7.5.1 Introduction

Chhattisgarh lies between latitude 17°47' and 24°06' N and longitude 80°15' and 84°24' E. Geographical area of the State is 135,191 km<sup>2</sup> which constitutes 4.1% of the land area of the country. The State is rich in forest and mineral resources. The State can be divided into three agro-climatic zones, viz. the Chhattisgarh Plains (11 districts), the Northern Hills of Chhattisgarh (2 districts), and the Bastar Plateau (3 districts). The annual rainfall varies from 1,100 mm to 1,700 mm, and the temperature ranges between 11°C to 47°C. The land use pattern of the State is shown in Table 7.5.1.

The total population of the State is 20.83 million (Census 2001), which constitutes 2.03% of the country's population. Rural population is 79.93% and urban 20.07%; the Scheduled Tribes constitute 31.8% of the population. The population density is 154 persons per km<sup>2</sup>. The projected population of the State by the Office of RGI, for the year 2009 is 23.60 million. The livestock population is 13.5 million (Livestock Census 2003).

### 7.5.2 Recorded Forest Area

The recorded forest area in the State is 59,772 km<sup>2</sup>, which is 44.21% of the geographical area. Reserved, Protected and Unclassed Forests constitute 43.13%, 40.21% and 16.65% of the total forest area respectively.

### 7.5.3 Protected Areas

The State has 3 National Parks and 11 Wildlife Sanctuaries covering an area of 0.29 million ha and 0.36 million ha respectively. Thus a total of 0.65 million ha area constituting 4.79% of the geographical area of the State is under protected area network.

### 7.5.4 Joint Forest Management

Joint Forest Management in the State began in 1991. A new JFM Resolution was issued in November 2001 after creation of the State. There are 7,050 JFM Committees in the State. A total of about 2.83 million ha of forest area is under JFM, which is about 48% of the total forest area of the State. More than 270,000 families are involved in this programme.

Source: MoEF, 2005.

### 7.5.5 Forest Cover

The forest cover in the State, based on interpretation of satellite data of November-December 2006, is 55,870 km<sup>2</sup>, which is 41.33% of the State's geographical area. In terms of forest canopy density classes, the State has 4,162 km<sup>2</sup> very dense forest, 35,038 km<sup>2</sup> moderately dense forest and 16,670 km<sup>2</sup> open forest. The distribution of forest cover of the State is shown in Fig. 7.5.

Table 7.5.1: Land use pattern

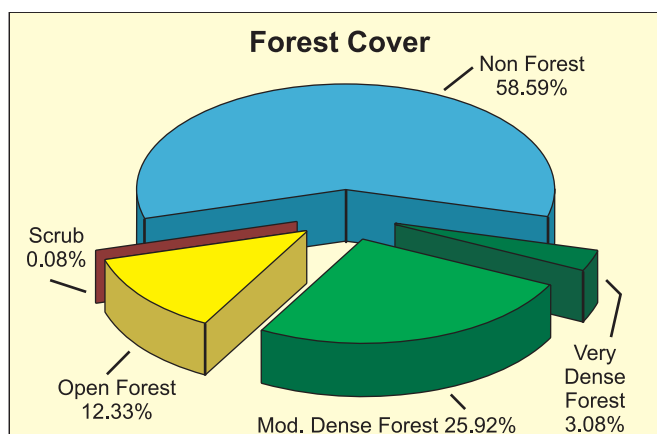
Land Use	Area in '000 ha	Percentage
Total geographical area	13,519	
Reporting area for land utilization	13,790	100.00
Forests	6,355	46.08
Not available for cultivation	996	7.22
Permanent pastures and other grazing lands	857	6.21
Land under misc. tree crops & groves	1	0.01
Culturable wasteland	350	2.54
Fallow lands other than current fallows	238	1.73
Current fallows	271	1.97
Net area sown	4,772	34.24

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

Comparison of the current forest cover (satellite data of Nov - Dec 2006) with the previous assessment (satellite data of Oct - Dec 2004) shows a loss of 59 km<sup>2</sup> of forest cover.

The change matrix, given in Table 7.5.2, reveals that there has been a decrease of 4 km<sup>2</sup> in very dense forest, 108 km<sup>2</sup> in moderately dense forest and increase of 53 km<sup>2</sup> open forest.

On the basis of ground truthing by the officials of FSI and the information gathered from the State Forest Department, main reasons for the increase in forest cover in Bastar, Mahasamund and Janjgir-Champa districts are new plantations and protection. The reasons for decrease in forest cover in the district Korea is due to mining activity and encroachments. The decrease in forest cover in the districts of Kanker, Kawardha, Raipur, Rajnandgaon and Sarguja is due to



encroachment in insurgency affected area.

District wise forest cover in different canopy density classes and scrub along with the changes compared to 2005 assessment are given in the Table 7.5.3.

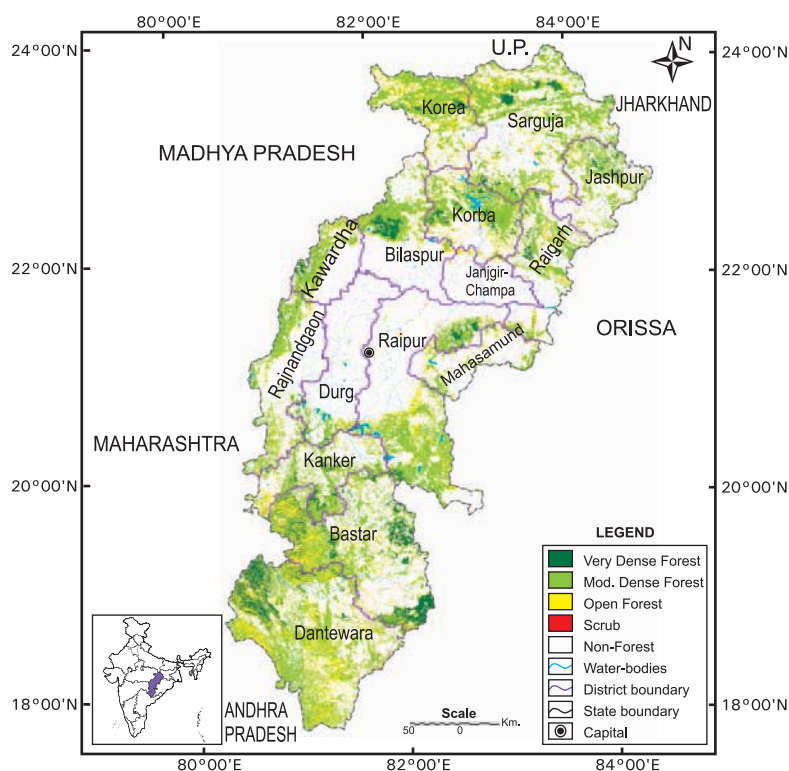


Fig 7.5 : Forest cover map of Chhattisgarh

**Table 7.5.2: Forest cover change matrix**

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

2005 Assessment (Data of Oct-Dec 2004)	2007 (Data of Nov - Dec 2006)					Total of 2005
	VDF	MDF	OF	Scrub	NF	
Very Dense Forest	4,162	3	1	0	0	4,166
Moderately Dense Forest	0	34,990	133	0	23	35,146
Open Forest	0	45	16,494	1	77	16,617
Scrub	0	0	2	98	1	101
Non-Forest	0	0	40	8	79,113	79,161
<b>Total of 2007</b>	<b>4,162</b>	<b>35,038</b>	<b>16,670</b>	<b>107</b>	<b>79,214</b>	<b>135,191</b>
Net Change	-4	-108	53	6	53	

**Table 7.5.3: District-wise forest cover in 2007**

Number of districts: 16

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

District	Geographical area	Very dense forest	Mod. dense forest	Open forest	Total	% of G.A.	Change*	Scrub
Bastar <sup>T</sup>	14,974	1,352	4,341	2,336	8,029	53.62	9	8
Bilaspur <sup>T</sup>	8,270	336	1,631	531	2,498	30.21	-3	6
Dantewara <sup>T</sup>	17,634	1,081	6175	4,094	11,350	64.36	0	23
Durg <sup>T</sup>	8,549	43	523	203	769	9.00	0	3
Janjgir-Champa	3,852	4	26	127	157	4.08	2	2
Jashpur <sup>T</sup>	5,838	111	1,499	580	2,190	37.51	0	11
Kanker <sup>T</sup>	6,506	213	2,062	837	3,112	47.83	-10	1
Kawardha	4,223	70	1140	389	1,599	37.86	-6	3
Korba	6,599	204	2,308	842	3,354	50.83	-3	6
Korea	6,604	79	2,607	1,430	4,116	62.33	-36	3
Mahasamund	4,789	5	536	424	965	20.15	5	7
Raigarh <sup>T</sup>	7,086	126	1,704	732	2,562	36.16	0	8
Raipur & Dhamtari	16,468	189	3,848	1,432	5,469	33.21	0	7
Rajnandgaon <sup>T</sup>	8,068	29	1,789	717	2,535	31.42	-2	4
Sarguja <sup>T</sup>	15,731	320	4,849	1,996	7,165	45.55	-15	15
<b>Total</b>	<b>135,191</b>	<b>4,162</b>	<b>35,038</b>	<b>16,670</b>	<b>55,870</b>	<b>41.33</b>	<b>-59</b>	<b>107</b>

\* Change compared to 2005 assessment (revised).

## 7.5.6 Altitude Zone wise Forest Cover

Forest cover of the State in different altitude zones is given in Table 7.5.4.

**Table 7.5.4: Altitude zone wise forest cover**

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

Altitude Zone	VDF	MDF	OF	Total
0-500m	1,873	16,911	10,116	28,900
500-1000m	2,278	17,708	6,305	26,291
1000-2000m	11	419	249	679
<b>Total</b>	<b>4,162</b>	<b>35,038</b>	<b>16,670</b>	<b>55,870</b>

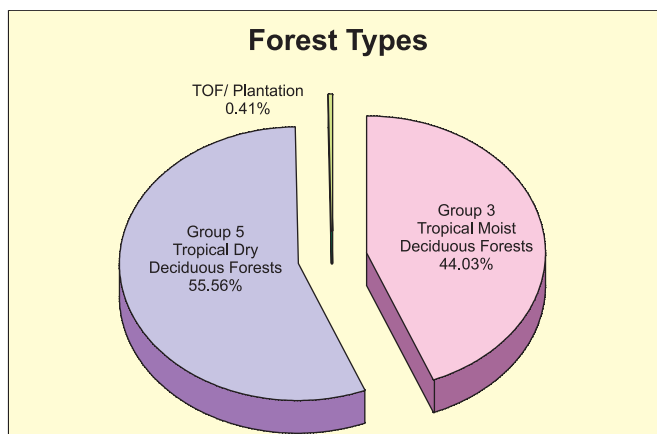
(based on SRTM Digital Elevation Model)

### 7.5.7 Forest Cover in different Forest Types

As per Champion & Seth Classification, the State has 9 forest types which belong to 2 forest type groups viz Tropical Moist Deciduous and Tropical Dry Deciduous Forests. Distribution of forest cover in different forest type groups found in the State is given in the pie diagram.

### 7.5.8 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 4,027 km<sup>2</sup> which is 2.98% of the geographical area of the State. Eight districts of the



State (Bilaspur, Dhamtari, Durg, Jashpur, Kawardha, Mahasamund, Raigarh and Rajnandgaon) have been inventoried. The forest and tree cover of the State is presented in the Table 7.5.5.

**Table 7.5.5: Forest & tree cover**

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

Category	Area	% of Geographical area
Tree Cover	4,027	2.98
Forest Cover	55,870	41.33
<b>Forest &amp; Tree Cover</b>	<b>59,897</b>	<b>44.31</b>