

7.12 JHARKHAND

7.12.1 Introduction

Jharkhand, a forest and mineral rich State, lies between latitude 22°00' and 24°37' N and longitude 83°15' and 87°01' E. It has an area of 79,714 km² which constitutes 2.42% of the geographical area of India. Its geography is marked by the plateau of Chhotanagpur, three major rivers - the Sone, the Koel, and the Damodar. Land use pattern of the State is given in the Table 7.12.1.

Jharkhand has a tropical climate with annual rainfall of about 900 mm and the temperature varies between 4°C to 47°C.

As per Census 2001, the total population of the State is 26.91 million of which the rural population constituted 77.80%. The population density is 338 persons per km². The Scheduled Tribes constituting 22.50% of the population are mainly distributed in eight districts. The projected population of the State is 30.61 million (as projected by the Office of the RGI for 2009) which constitutes 2.60% of the country's population. The livestock population as per Livestock Census 2003 is 15.83 million.

7.12.2 Recorded Forest Area

The recorded forest area of the State is 23,605 km² which is 29.61% of the geographical area of the State. Reserved Forests constitute 18.58%, Protected Forests 81.28%, and Unclassed Forests 0.14% of the total

forest area. The Chhotanagpur plateau is rich in forest resources.

7.12.3 Protected Areas

Jharkhand has one National Park and 11 Wildlife Sanctuaries covering an area of 2,182.15 km² which constitutes 2.74% of the State's geographical area. Palamu Tiger Reserve is located in the State covering an area 1,026 km².

7.12.4 Joint Forest Management

Started in 1990, the Joint Forest Management endeavor in the State has about 92.80% of the forest area under it. There are 10,903 JFM committees managing 2.19 million ha of forest area. About 1.28 million families are involved in JFM, of which 0.51 million families belong to Scheduled Tribes.

Source: MoEF, 2005.

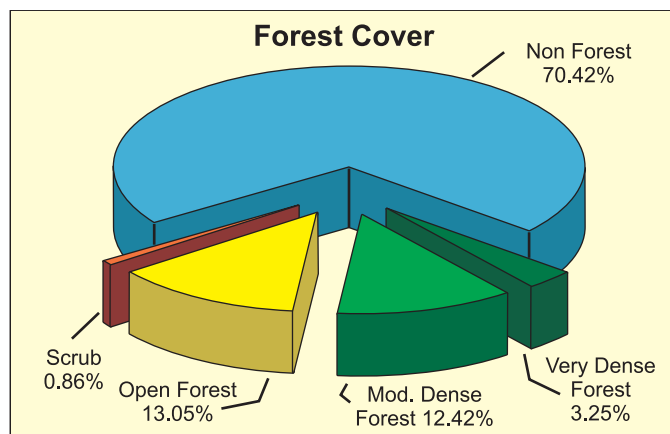
7.12.5 Forest Cover

The forest cover in the State, based on interpretation of satellite data of Oct -Dec 2006, is 22,894 km², which is 28.72% of the State's geographic area. In terms of forest canopy density classes, the State has 2,590 km² very dense forest, 9,899 km² moderately dense forest and 10,405 km² open forest. The distribution of forest cover of the State is shown in Fig. 7.12.

Table 7.12.1: Land use pattern

Land Use	Area in '000 ha	Percentage
Total geographical area	7,972	
Reporting area for land utilization	7,970	100.00
Forests	2,333	29.27
Not available for cultivation	1,365	17.13
Permanent pastures and other grazing lands	88	1.10
Land under misc. tree crops & groves	113	1.42
Culturable wasteland	274	3.44
Fallow lands other than current fallows	783	9.82
Current fallows	1,244	15.61
Net area sown	1,769	22.20

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



Comparison of the current forest cover (satellite data of Oct - Dec 2006) with the previous assessment (satellite data of Nov - Dec 2004) shows a gain of 172 km² of forest cover.

The change matrix, given in Table 7.12.2, reveals that there has been an increase of 7 km² in the moderately dense forest and 170 km² in open forest and a decrease of 5 km² in the very dense forest.

The increase in the forest cover in the districts of Palamu, Gumla, Hazaribag, Chatra, Lohardaga and Giridih is due to the protection given by village protection committees as observed by the FSI officials during field verification. Besides, Deoghar and Dumka have shown an increased forest cover owing to plantation of miscellaneous spp.

District wise forest cover in different canopy density classes and scrub along with the changes compared to 2005 assessment is given in the Table 7.12.3.

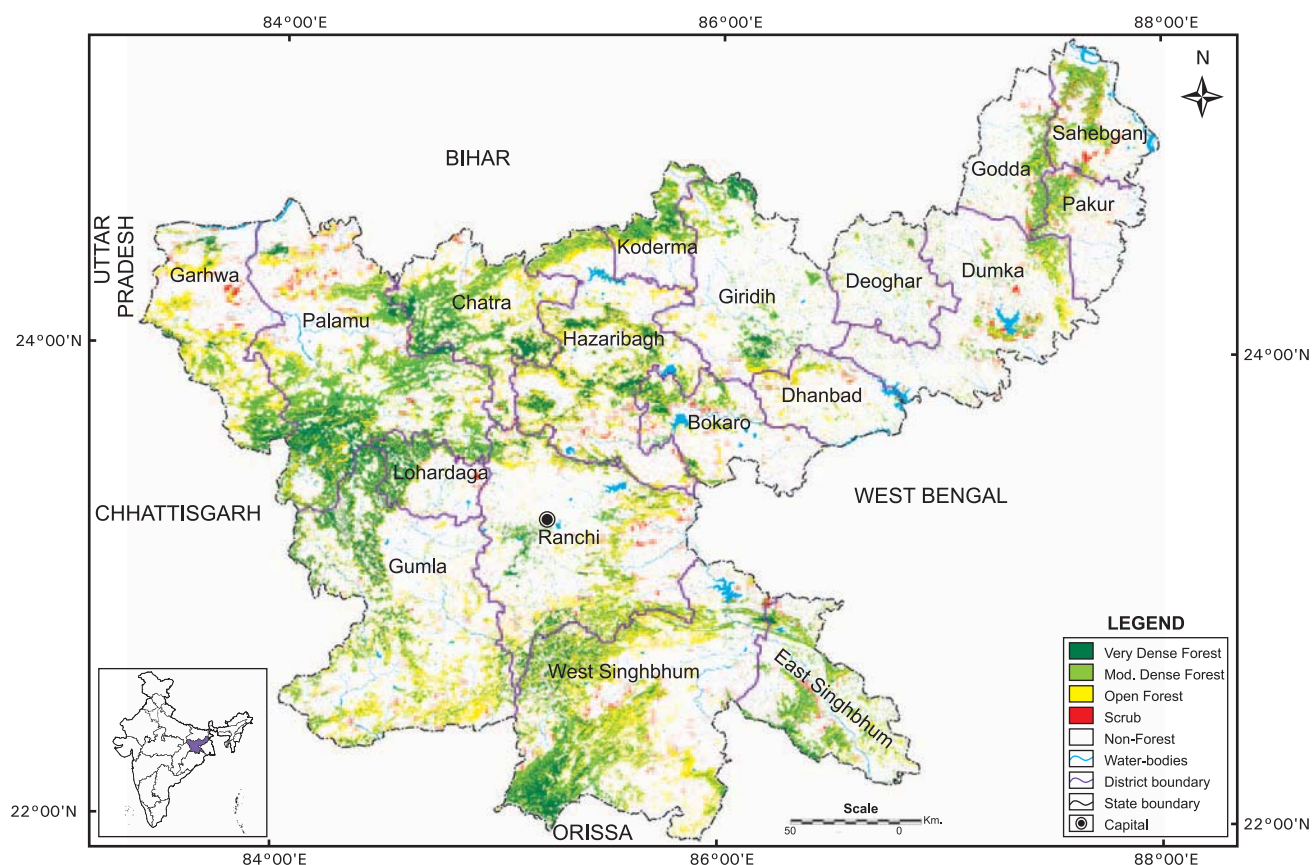


Fig 7.12 : Forest cover map of Jharkhand

Table 7.12.2: Forest cover change matrix

(area in km²)

2005 Assessment (Data of Nov -Dec 2004)	2007 (Data of Oct - Dec 2006)					Total of 2005
	VDF	MDF	OF	Scrub	NF	
Very Dense Forest	2,590	1	3	0	1	2,595
Moderately Dense Forest	0	9,873	4	0	15	9,892
Open Forest	0	2	10,205	4	24	10,235
Scrub	0	0	13	662	1	676
Non-Forest	0	23	180	17	56,096	56,316
Total of 2007	2,590	9,899	10,405	683	56,137	79,714
Net Change	-5	7	170	7	-179	

Table 7.12.3: District-wise forest cover in 2007

Number of districts: 18

(area in km²)

District	Geographical area	Very dense forest	Mod. dense forest	Open forest	Total	% of G.A.	Change*	Scrub
Bokaro	1,929	64	244	252	560	29.03	-1	48
Chatra	3,732	251	863	668	1,782	47.75	21	15
Deoghar ^T	2,479	0	84	85	169	6.82	6	5
Dhanbad	2,996	0	50	155	205	6.84	0	17
Dumka	6,212	0	314	323	637	10.25	2	58
Garhwa	4,092	124	406	835	1,365	33.36	0	55
Giridih	4,963	97	419	338	854	17.21	21	9
Godda	2,110	15	268	116	399	18.91	0	25
Gumla ^T	9,077	324	919	1,414	2,657	29.27	35	33
Hazaribagh	5,998	272	622	1,159	2,053	34.23	42	45
Koderma	1,435	69	320	211	600	41.81	5	0
Lohardaga ^T	1,491	174	219	110	503	33.74	11	10
Pakur ^T	1,571	3	172	108	283	18.01	-1	19
Palamu ^T	8,657	529	1,809	1,189	3,527	40.74	31	88
West Singhbhum ^T	9,907	453	1,558	1,824	3,835	38.71	0	80
East Singhbhum ^T	3,533	53	612	346	1,011	28.62	9	37
Ranchi ^T	7,698	141	684	1,079	1,904	24.73	5	67
Sahebganj	1,834	21	336	193	550	29.99	-14	72
Total	79,714	2,590	9,899	10,405	22,894	28.72	172	683

* Change compared to 2005 assessment (revised).

7.12.6 Altitude Zone wise Forest Cover

Forest cover of the State in different altitude zones is given in Table 7.12.4.

Table 7.12.4: Altitude zone wise forest cover

(area in km²)

Altitude Zone	VDF	MDF	OF	Total
0-500m	1,046	6,984	7,543	15,573
500-1000m	1,483	2,785	2,828	7,096
1000-2000m	61	130	34	225
Total	2,590	9,899	10,405	22,894

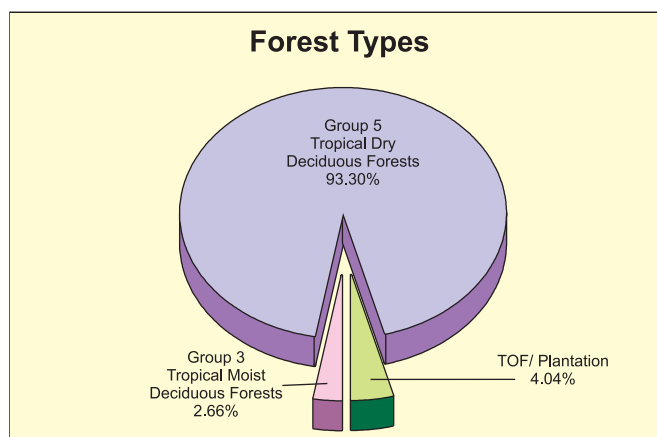
(based on SRTM Digital Elevation Model)

7.12.7 Forest Cover in different Forest Types

As per Champion & Seth Classification, the State has 6 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.

7.12.8 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 3,032 km² which is 3.80 % of the geographical area of the State. Six districts of the State



(Bokaro, Deoghar, Giridih, Gumla, Koderma and Ranchi) have been inventoried. The forest and tree cover of the State is presented in the Table 7.12.5.

Table 7.12.5: Forest & tree cover

(area in km²)

Category	Area	% of Geographical area
Tree Cover	3,032	3.80
Forest Cover	22,894	28.72
Forest & Tree Cover	25,926	32.52