8.12 JHARKHAND

8.12.1 Introduction

Jharkhand, one of the most important mineral producing States, came into existence on November 15, 2000 by carving out from the erstwhile State of Bihar. It has a geographic area of 7.97 million ha which is 2.42% of the land area of India. It lies between lat 22°00' and 24°37' N and long 83°15' and 87°01' E. Geography of the State is marked by the plateau of Chhotanagpur, three major rivers - the Sone, the Koel, and the Damodar – and a tropical climate.

The total population of the State is 26.91 million *(Census 2001)* of which 77.8% is rural and rest is urban. Population density of the State is 338 persons per km^2. The State supports a livestock population of 15.83 million *(Livestock Census 2003)*.

Scheduled Tribes constitute 22.5% of the total population spread over in eight districts, viz., Deodhar, Gumla, Lohardaga, Pakur, Palamu, Pashchimi Singbhum, Purbi Singbhum, and Ranchi. The land use pattern of Jharkhand is given in the Table 8.12a.

8.12.2 Forest Resources

The recorded forest area is 23,605 km^2 which is 29.61% of the geographic area of the State. By legal status, Reserved Forests constitute 18.83%, Protected Forests, 81.14%, and Unclassed Forests, 0.03%. The Chhotanagpur plateau is rich in forest resources.

The three major forest types in the State are Tropical Moist Deciduous, Tropical Dry Deciduous, and Subtropical Broadleaved Hill Forests. Sal *(Shorea robusta)*, the State tree, is the major forest species.

8.12.3 Protected Areas

Jharkhand has 1 National Park and 10 Wildlife Sanctuaries covering an area of 0.21 million ha which constitutes 2.62% of the total geographic area of the State. Palamu Tiger Reserve is also located in the State covering an area 1,026 km^2.

8.12.4 Joint Forest Management

Joint Forest Management began in the State in 1990. There are 10,903 JFM committees managing 2.19 million ha of forest area as on March 2005 which is about 92.8% of the forest area of the State. About 1.28 million families are involved in JFM, of which 0.51 million belong to Scheduled Tribes.

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

8.12.5 Forest Cover

The forest cover of the State, based on satellite data of November-December 2004, is 22,591 km^2, which is 28.34% of the geographic area. Very dense forest is 2,544 km^2, moderately dense forest is 9,078 km^2, and open forest 10,969 km^2. The forest cover of the State is shown in Fig 8.12.

An increase of 22 km^2 of forest cover has been assessed in the present assessment as compared to the

Table 8.12a: Land use pattern

Land Use	Area in '000 ha	Percentage
Total geographical area	7,972	
Reporting area for land utilisation	7,970	100
Forests	2,333	29.27
Not available for cultivation	1,366	17.14
Permanent pasture and other grazing lands	88	1.10
Land under misc. tree crops & groves	113	1.42
Culturable wasteland	274	3.44
Fallow land 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, 2005

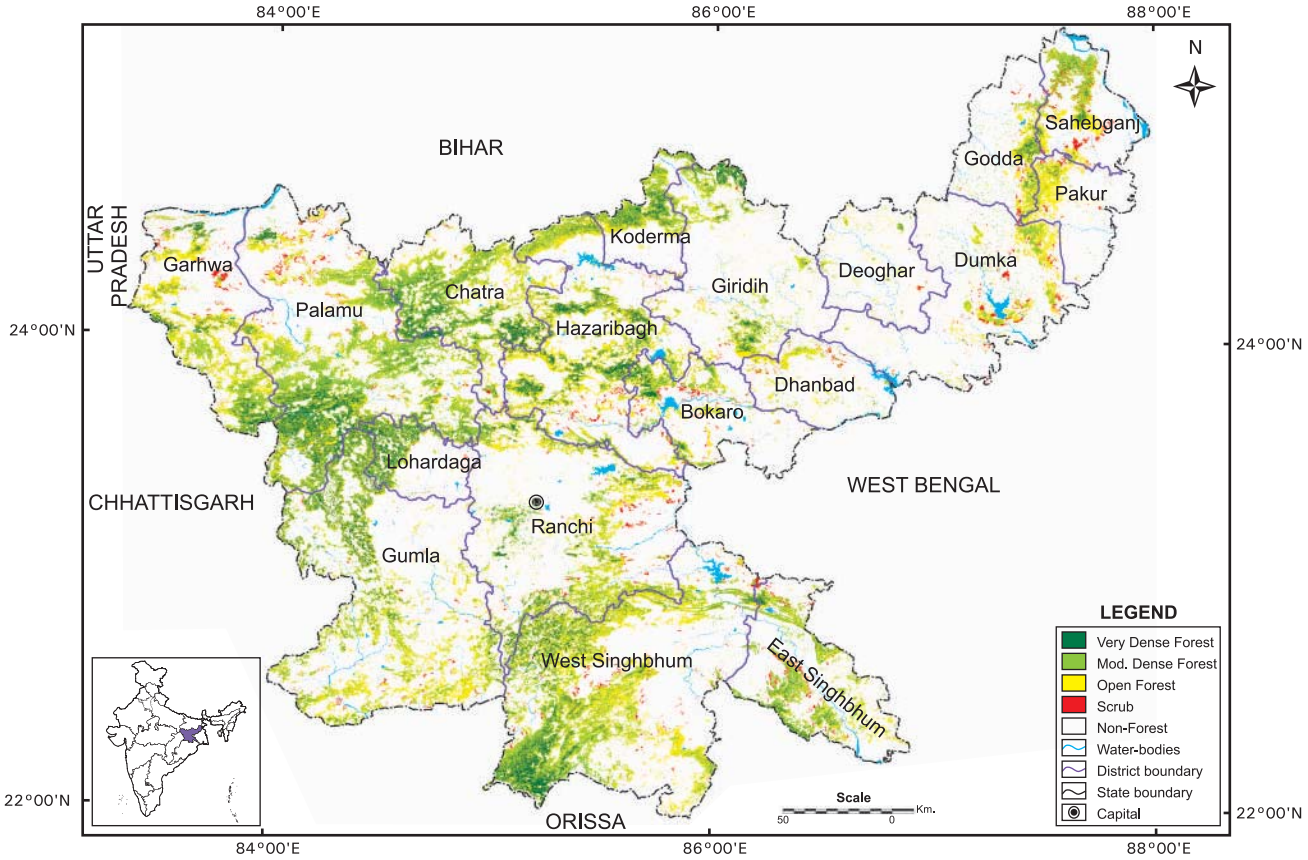
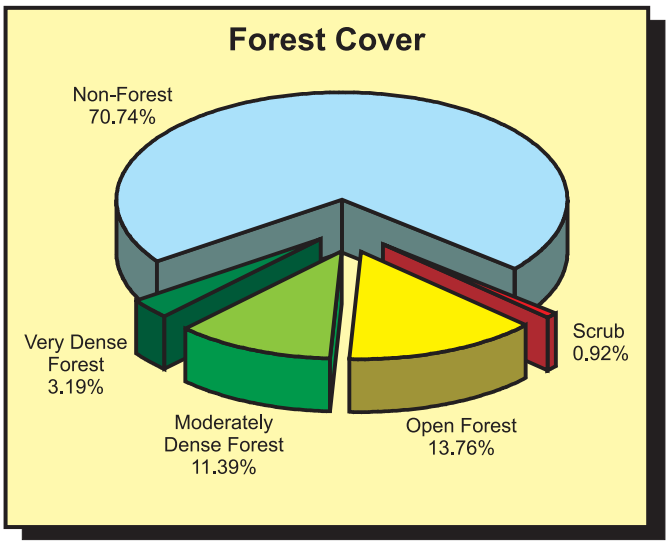


Fig 8.12 : Forest Cover Map of Jharkhand



previous assessment (based on satellite data of November-December 2002).

The change matrix, given in Table 8.12b reveals that there has been an increase of 2 km^2 in moderately dense forest, and 20 km^2 in open forest.

The increase in the forest cover in the districts of Palamu, Hazaribag, Garhwa, Chatra, Dumka, and Giridih are due to the protection given by village protection committees to the coppices growth of sal as observed by the FSI officials during field verification. Besides, Deoghar district has shown an increased forest cover owing to plantation of miscellaneous spp.

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 8.12c.

8.12.6 Tree Cover

Tree cover of Jharkhand 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 526 sample plots spread over 4 districts of the State between 2002-06 and the estimated tree cover in the State is 3,080 km^2.

The forest and tree cover of the State is presented in the Table 8.12d.

Table 8.12b: Forest cover change matrix

(area in km^2)

2003 Assessment (Data of Nov.-Dec. 2002)	2005 Assessment (Data of Nov.-Dec. 2004)					Total 2003
	VDF	MDF	OF	Scrub	NF	
Very Dense Forest	2,544	0	0	0	0	2544
Moderately Dense Forest	0	9,076	0	0	0	9,076
Open Forest	0	0	10,949	0	0	10,949
Scrub	0	0	0	733	0	733
Non Forest	0	2	20	0	56,390	56,412
Total 2005	**2,544**	**9,078**	**10,969**	**733**	**56,390**	**79,714**
Net Change	0	2	20	0	-22	

Table 8.12c: District-wise forest cover

Number of Districts: 18

(area in km^2)

District	Geographic area	2005 Assessment				Percent of G.A.	Change	Scrub
		Very dense forest	Mod. dense forest	Open forest	Total			
Bokaro	1929	58	227	295	580	30.07	0	52
Chatra	3732	259	844	687	1,790	47.96	6	12
Deoghar[T]	2479	3	26	91	120	4.84	5	4
Dhanbad	2996	0	45	163	208	6.94	0	20
Dumka	6212	0	120	408	528	8.50	3	75
Garhwa	4092	144	448	821	1,413	34.53	2	55
Giridih	4963	98	301	421	820	16.52	1	10
Godda	2110	32	120	237	389	18.44	0	28
Gumla[T]	9077	261	904	1,385	2,550	28.09	0	36
Hazaribagh	5998	282	632	1,159	2,073	34.56	1	53
Koderma	1435	93	288	222	603	42.02	0	1
Lohardaga[T]	1491	148	223	128	499	33.47	0	5
Pakur[T]	1571	7	45	244	296	18.84	0	16
Palamu[T]	8657	496	1,802	1,273	3,571	41.25	4	84
Pashchimi Singhbhum[T]	9907	442	1,593	1,771	3,806	38.42	0	81
Purbi Singhbhum[T]	3533	51	534	360	945	26.75	0	60
Ranchi[T]	7698	144	677	1,029	1,850	24.03	0	67
Sahebganj	1834	26	249	275	550	29.99	0	74
Total	**79,714**	**2,544**	**9,078**	**10,969**	**22,591**	**28.34**	**22**	**733**

Table 8.12d: Forest & tree cover

(area in km^2)

Category	Area	% of Geographical Area
Tree Cover	3,080	3.86
Forest Cover	22,591	28.34
Forest & Tree Cover	**25,671**	**32.20**