

7.20 NAGALAND

7.20.1 Introduction

Situated in the northeastern part of India, Nagaland shares international border with Myanmar. It lies between latitude 25°10' and 27°4' N and longitude 93°15' and 25°6' E and has geographical area of 16,579 km². Nagaland consists of a narrow strip of hilly area running northeast to southwest which is located in the northern extension of the Arakan Yoma ranges. The altitude of terrain varies from 194 m to 3,826 m.

Average annual rainfall in the State is 2,000 mm. The summer temperature varies from 15°C to 30°C and winter temperature ranges from 4°C to 25°C.

As per Census 2001, the total population of the State is 1.99 million of which the rural population constitutes 82.78%. The population density is 120 persons per km². The Scheduled Tribes constitute 89.1% of the population. The projected population of the State is 2.20 million (as projected by the Office of RGI for 2009). The livestock population of the State is 1.35 million (Livestock Census 2003), which has increased by nearly 26% since the census of 1992.

Land use pattern of the State is given in Table 7.20.1.

7.20.2 Recorded Forest Area

The recorded forest area of the State is 9,222 km². Reserved Forests constitute 0.93%, Protected

Forests 5.51% and Unclassed Forests 93.56% of the total forest area. About 56 % of the State's geographical area is under recorded forests.

7.20.3 Protected Areas

Nagaland has 1 National Park and 3 Wildlife Sanctuaries covering an area of 222 km² which constitutes 1.34% of the State's geographical area.

7.20.4 Joint Forest Management

JFM started in the State in 1997. There are 335 JFM Committees managing about 20,000 ha of forest area. About 85,000 families are involved in this programme, mostly belonging to the Scheduled Tribes. *Source: MoEF, 2005.*

7.20.5 Forest Cover

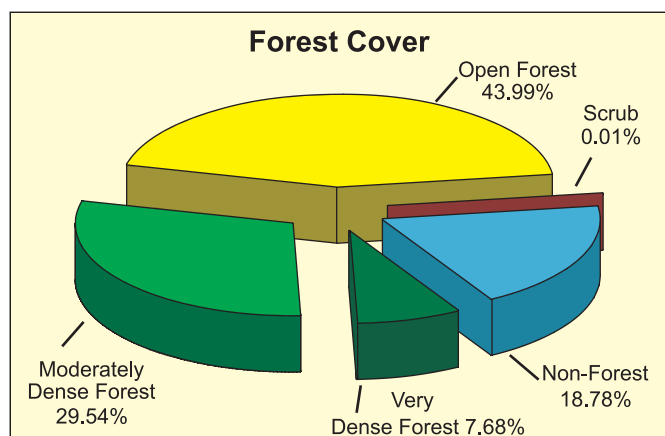
The forest cover in the State, based on interpretation of satellite data of Dec 2006 - Jan 2007, is 13,464 km², which is 81.21% of the State's geographical area. In terms of forest canopy density classes, the State has 1,274 km² very dense forest, 4,897 km² moderately dense forest and 7,293 km² open forest. The distribution of forest cover of the State is shown in Fig. 7.20.

Comparison of the current forest cover (satellite data of Dec 2006 - Jan 2007) with the previous assessment (satellite data of Jan - Feb 2005) shows a loss of 201 km² of forest cover.

Table 7.20.1: Land use pattern

Land Use	Area in '000 ha	Percentage
Total geographical area	1,658	
Reporting area for land utilization	1,595	100.00
Forests	863	54.11
Not available for cultivation	75	4.70
Permanent pastures and other grazing lands	0	0.00
Land under misc. tree crops & groves	120	7.52
Culturable wasteland	57	3.57
Fallow lands other than current fallows	76	4.76
Current fallows	82	5.14
Net area sown	322	20.19

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



The change matrix, given in Table 7.20.2, reveals that there has been a decrease of 6 km² in the very dense forest, 175 km² in the moderately dense forest and 20 km² in open forest.

On the basis of ground truthing by the officials of FSI, main reason for the net decrease in forest cover was the shifting cultivation.

District wise forest cover in different canopy density classes and scrub along with the changes compared to 2005 assessment is given in the Table 7.20.3.

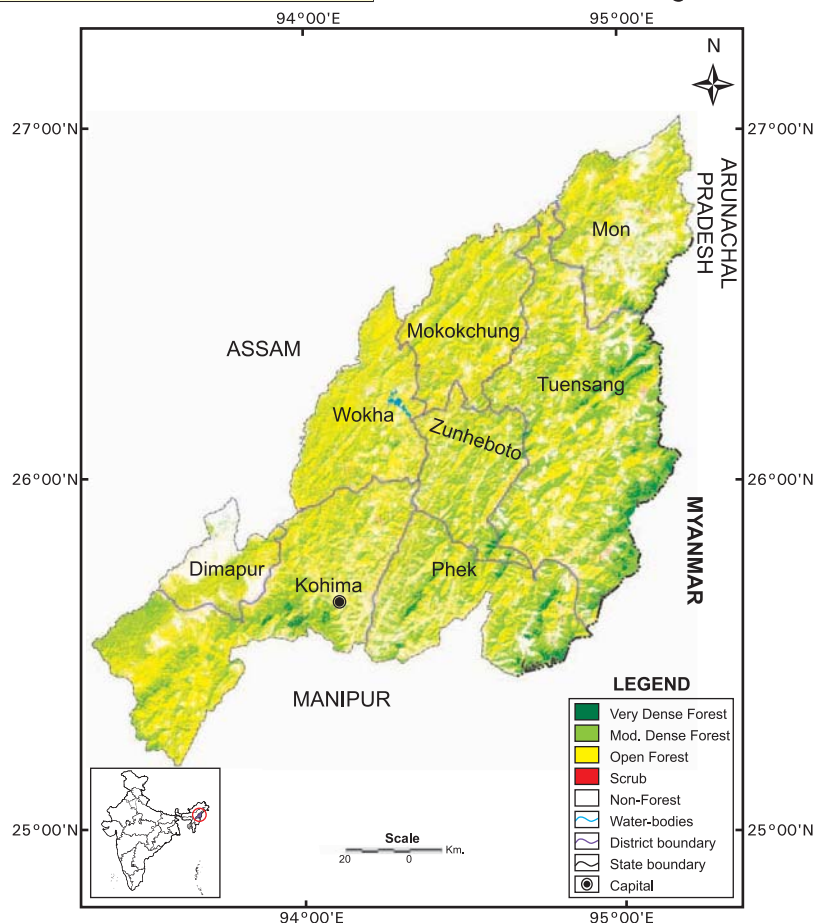


Fig. 7.20 : Forest cover map of Nagaland

Table 7.20.2: Forest cover change matrix

(area in km²)

2005 Assessment (Data of Jan- Feb 2005)	2007 (Data of Dec 2006 - Jan 2007)					Total of 2005
	VDF	MDF	OF	Scrub	NF	
Very Dense Forest	1,239	22	8	0	11	1,280
Moderately Dense Forest	28	4,479	302	0	263	5,072
Open Forest	7	301	6,366	0	639	7,313
Scrub	0	0	4	2	3	9
Non-Forest	0	95	613	0	2,197	2,905
Total of 2007	1,274	4,897	7,293	2	3,113	16,579
Net Change	-6	-175	-20	-7	208	

Table 7.20.3: District-wise forest cover in 2007

Number of districts: 8

(area in km²)

District	Geographical area	Very dense forest	Mod. dense forest	Open forest	Total	% of G.A.	Change*	Scrub
Dimapur TH	758	0	126	275	401	52.90	7	0
Kohima TH	3,283	285	921	1,659	2,865	87.27	50	0
Mokokchung TH	1,615	3	535	857	1,395	86.38	-50	0
Mon TH	1,786	33	501	760	1,294	72.45	-32	1
Phek TH	2,026	279	683	749	1,711	84.45	49	0
Tuensang TH	4,228	585	1,193	1,562	3,340	79.00	-122	1
Wokha TH	1,628	1	511	902	1,414	86.86	-50	0
Zunheboto TH	1,255	88	427	529	1,044	83.19	-53	0
Total	16,579	1,274	4,897	7,293	13,464	81.21	-201	2

* Change compared to 2005 assessment (revised).

7.20.6 Altitude Zone wise Forest Cover

Forest cover of the State in different altitude zones is given in Table 7.20.4.

Table 7.20.4: Altitude zone wise forest cover

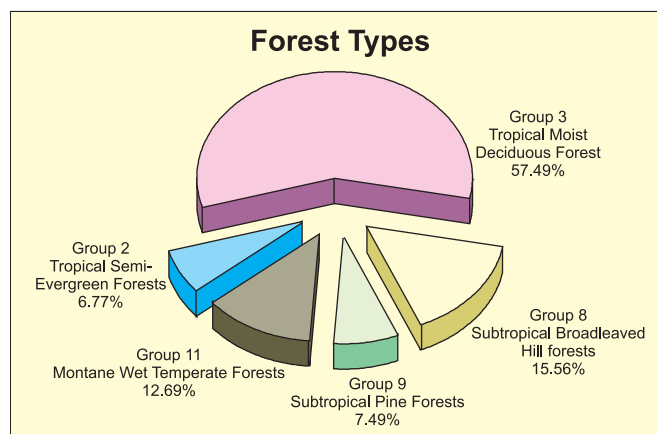
(area in km²)

Altitude Zone	VDF	MDF	OF	Total
0-500m	0	1,233	1,930	3,163
500-1000m	22	1,349	2,648	4,019
1000-2000m	636	2,052	2,569	5,257
2000-3000m	611	250	141	1,002
>3000m	5	13	5	23
Total	1,274	4,897	7,293	13,464

(based on SRTM Digital Elevation Model)

7.20.7 Forest Cover in different Forest Types

The State has 6 different forest types as per Champion & Seth's classification system (1968), belonging to 5 type groups viz. Tropical Semi Evergreen, Tropical Moist Deciduous, Subtropical Broadleaved Hill, Subtropical Pine and Montane Wet Temperate Forests. Distribution of forest cover in different forest type groups found in the State is given in the pie diagram.



7.20.8 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 300 km² which is 1.81% of the

geographical area of the State. Kohima district of the State has been inventoried. The forest and tree cover of the State is presented in the Table 7.20.5.

Table 7.20.5: Forest & tree cover

(area in km²)

Category	Area	% of Geographical area
Tree Cover	300	1.81
Forest Cover	13,464	81.21
Forest & Tree Cover	13,764	83.02