

Growing forest cover

India's forest cover has been growing in recent years, with a steep rise in the extent of very dense forests, but the loss of over 20,000 sq km of moderately dense forests is a cause for concern. By **RAMESH CHAKRAPANI**

India's forest cover has increased by 5,871 square kilometres from the government's 2011 assessment to 6,97,898 sq km or 69.79 million hectares, according to the Indian State of Forest Report 2013 released by the Forest Survey of India (FSI) under the Ministry of Environment and Forests. Forest cover is distinct from forest area, which usually refers to all the geographic areas recorded as forest in government records.

The report defines forest cover as all lands greater than one hectare in area having a tree canopy density of more than 10 per cent.

Thus, forest cover indicates presence of trees over any tract of land.

The FSI has been assessing the state of Indian forests since 1987 and data from its reports reveal that the

country's forest cover fell sharply from 6,40,819 sq km in 1987 to 6,33,397 sq km in 1997, before recovering to 6,90,899 sq km in 2007 and 6,92,027 sq km in 2011.

Forest cover as a percentage of the country's total geographic area reached an all-time high of 21.23 in 2013.

It stood at 19.49 per cent in 1987, dipped to 19.27 per cent in 1997 before rising again in 2001 to cross the 20-percentage-point mark (20.55 per cent), after which it has stayed above 20 per cent.

According to the FSI report, the survey was made using latest satellite data for wall-to-wall mapping of the country's forests on a biennial cycle.

The biennial report contains information about district-wise forest cover assessment of the States and changes

Change in the country's forest cover over years

Year	Forest cover estimate (sq km)	% of total area
1987	6,40,819	19.49
1989	6,38,804	19.43
1991	6,39,364	19.45
1993	6,39,386	19.45
1995	6,38,879	19.43
1997	6,33,397	19.27
1999	6,37,293	19.39
2001	6,75,538	20.55
2003	6,78,333	20.64
2005	6,77,088	20.60
2007	6,90,899	21.02
2011	6,92,027	21.05
2013	6,97,898	21.23

from the previous assessment regarding different canopy classes.

Madhya Pradesh has the highest forest cover in the country, followed by Arunachal Pradesh, Maharashtra, Orissa and (undivided) Andhra Pradesh. Assam and the north-eastern States together account for more than a quarter of the country's total forest cover.

CLASSIFICATION

Forests are classified into very dense forests, moderately dense forests and open forests.

The FSI figures show that while the extent of very dense forests zoomed from 51,285 sq km in the 2003 assessment to 83,502 sq km, a leap of 63 per cent, the area under moderately dense forests fell 6 per cent from 3,39,279 sq km to 3,18,745 sq km in the latest assessment. The extent of open forests was up at 2,95,651 sq km from 2,87,769 sq km a decade earlier.

TREE COVER

The tree cover of the country was estimated at 91,266 sq km (9.13 million hectares), and together, the total forest and tree cover of the country was

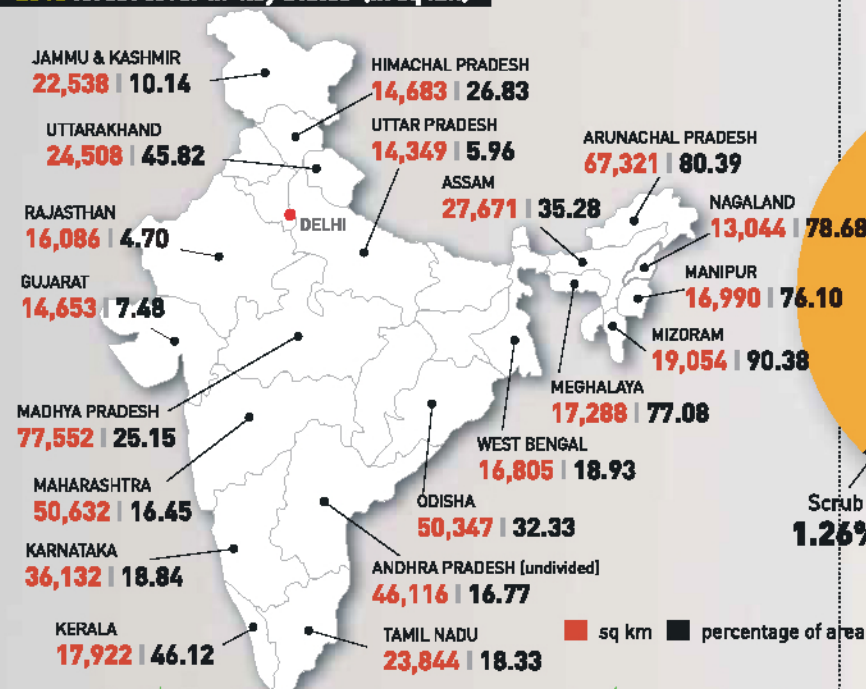
7,89,164 sq km (78.92 million hectares), or 24.01 per cent of the country's total geographic area.

With urbanisation in the country on the rise, up from 27.81 per cent in 2001 to 31.16 per cent in 2011, according to Census 2011 figures, and a corresponding rise in the urban population, the need for urban tree cover has never been more acute.

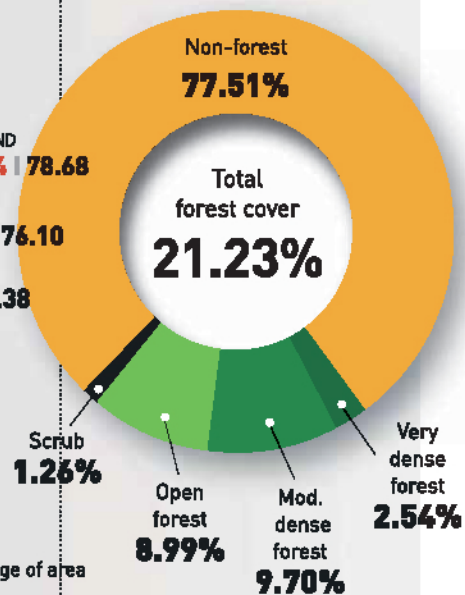
The latest FSI data show that Tamil Nadu topped the States with a total urban tree cover of 1,509 sq km, which accounts for 12.08 per cent of its total urban area.

Kerala, which stood fourth, was number one in terms of percentage of urban area (38.17 per cent).

2013 forest cover in key States (In sq km)



Forest cover in India



Top 10 States by urban tree cover 2013

State	Urban tree cover (sq km)	% of urban area
Tamil Nadu	1,509	12.08
Maharashtra	1,373	18.78
Karnataka	1,276	24.69
Kerala	1,241	38.17
Gujarat	1,210	23.15
Madhya Pradesh	996	14.30
Uttar Pradesh	816	12.45
Andhra Pradesh*	809	17.04
Rajasthan	702	12.92
West Bengal	464	13.95

* Data pertain to undivided Andhra Pradesh

States and Union Territories with forest cover more than 33 per cent of area in sq km

States & Union Territories	Geographical area	Very dense forest	Mod. dense forest	Open forest	Total
Mizoram	21,081	138	5,900	13,016	19,054
A&N Islands	8,249	3,754	2,413	544	6,711
Arunachal Pradesh	83,743	20,828	31,414	15,079	67,321
Nagaland	16,579	1,298	4,736	7,010	13,044
Meghalaya	22,429	449	9,689	7,150	17,288
Manipur	22,327	728	6,094	10,168	16,990
Tripura	10,486	109	4,641	3,116	7,866
Goa	3,702	543	585	1,091	2,219
Sikkim	7,096	500	2,161	697	3,358
Kerala	38,863	1,529	9,401	6,992	17,922
Uttarakhand	53,483	4,785	14,111	5,612	24,508
Chhattisgarh	135,191	4,153	34,865	16,603	55,621
Assam	78,438	1,444	11,345	14,882	27,671

INFOGRAPHIC BY T.S. VIJAYANANDAN