

The case for open, verifiable Forest Cover data

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What's in today's article?

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- How is data computed for the Report
- Forest Land Encroachment
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- Shrinking of Natural Forests
- How to Expand India's Forest Cover?

Background

- India is one of the few countries to have a scientific system of periodic forest cover assessment in the form of **India State of Forest Report**.
- India State of Forest Report is an **assessment of India's forest and tree cover**.
 - It is published every two years by the **Forest Survey of India (FSI)** under the Ministry of Environment, Forests and Climate Change.

- The first survey was published in **1987**.

How is data computed for the Report?

- Data is computed through wall-to-wall mapping of India's forest cover through remote sensing satellites.
- Three categories of forests are surveyed –
 - **Very Dense Forests** (canopy density over 70%),
 - **Moderately Dense Forests** (40-70%) and **Open Forests** (10-40%),
 - **Scrubs** (canopy density less than 10%)
 - **Forest Cover** is defined as –
 - ***“An area more than 1 ha in extent and having tree canopy density of 10 percent and above”.***
- **Tree Cover** is defined as –
 - ***“Tree patches outside recorded forest areas exclusive of forest cover and less than the minimum mappable area of one hectare”.***

Image Caption: Forest Cover in India

- The data is used in planning and formulation of policies in forest management as well as forestry and agroforestry sectors.
- Since 19.53% in the early 1980s, ***India's forest cover has increased to 21.71% in 2021.***
- Adding to this a notional 2.91% tree cover estimated in 2021, the country's total green cover now stands at 24.62%, on paper.

Forest Land Encroachment

- Encroachment is a term used to describe the advancement of structures, roads, railroads, improved paths, utilities, and other development, into natural areas.
- The National Remote Sensing Agency (NRSA) under the Department of Space estimated ***India's forest cover using satellite imagery for periods 1971-1975 and 1980-1982 to report a loss of 2.79%***. It declined from 16.89% to 14.10% — in just seven years.
- While reliable data on encroachment is unavailable, government records show that 42,380 sq km — nearly the size of Haryana— of forest land was diverted for non-forest use between 1951 and 1980.

Loss of Old Forests

- In India, land recorded as forest in revenue records or proclaimed as forest under a forest law is described as **Recorded Forest Area**.

- Over time, some of these Recorded Forest Areas lost forest cover due to encroachment, diversion, forest fire etc.
 - Meanwhile, tree cover improved in many places outside the Recorded Forest Areas due to agro-forestry, orchards etc.
- In 2011, when the FSI furnished data on India's forest cover inside and outside Recorded Forest Areas, it came to light that ***nearly one-third of Recorded Forest Areas had no forest at all.***
- In other words, ***almost one-third of India's old natural forests — over 2.44 lakh sq. km (larger than Uttar Pradesh) or 7.43% of India — were already gone.***

Shrinking of Natural Forests

- Even after extensive plantation by the forest department since the 1990s, dense forests within Recorded Forest Areas added up to cover only 9.96% of India in 2021.
- This loss remains invisible due to the inclusion of commercial plantations, orchards, village homesteads, urban housings etc as dense forests outside Recorded Forest Areas.
- **The steady replacement of natural forests with plantations are worrisome for the following reasons -**
 - First, natural forests have evolved naturally to be diverse and, therefore, support a lot more biodiversity.
 - Secondly, plantation forests have trees of the same age, are more susceptible to fire, pests and epidemics, and often act as a barrier to natural forest regeneration.
 - Thirdly, natural forests are old and therefore stock a lot more carbon in their body and in the soil.

How to Expand India's Forest Cover?

- As mentioned earlier, India's forest cover has increased to 21.71% in 2021.
 - Soon after its independence from Britain in 1947, India came out with its first national forest policy in 1952, which had a target of **bringing 33 percent of India's land under forest cover** and since then, the target has remained as it is.
- In the present scenario, the possibility of a sizeable increase in forest cover is limited due to the inelasticity of forest land.
- However, the ***balance of 9 percent can be achieved through taking up plantation/afforestation outside the forests and restocking/plantation in degraded and scrub forests.***
- This can be done by -
 - Substantially increasing the tree cover outside forests by incentivising and promoting agro-forestry and farm forestry;
 - Managing and expanding green spaces in urban and peri-urban areas to enhance citizens' well-being;
 - Plantation of trees outside forests in partnership with local communities, land-owning agencies, and private enterprises;

- Creation, sustainable management and promotion of urban forests (woodlands, gardens, avenue plantations, herbal gardens, etc.) as an integral component of urban habitat planning and development;
 - Afforestation/reforestation in public-private partnership (PPP) mode;
 - Promotion of urban forests, which include woodlands, wetlands, parks, tree groves, tree garden, plantations in institutional areas, on avenues and around water bodies, etc.
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Q1) What is meant by Tree Canopy?

Tree canopy means **the branches, leaves, or other foliage from woody vegetation exceeding five (5) feet in height.**

Q2) What is the aim of Forest Survey of India?

To prepare State of Forest Report biennially, providing assessment of latest forest cover in the country and monitoring changes in these. To conduct inventory in forest and non-forest areas and develop database on forest tree resources. To prepare thematic maps on 1:50,000 scale, using aerial photographs.

Source: [The case for open, verifiable forest cover data](https://vajiramandravi.com/current-affairs/the-case-for-open-verifiable-forest-cover-data/)

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