



## 18th India State of Forest Report 2023

**For Prelims:** [India State of Forest Report](#), [Forest Survey of India](#), [Carbon Stock](#), [Western Ghats Eco-Sensitive Areas](#), [Mangrove](#), [Nationally Determined Contribution](#), [Carbon Sink](#), [Degraded Land](#), [Bonn Challenge](#), [Global Forest Resource Assessment](#), [FAO](#), [Forest Cover](#), [National Commission on Agriculture](#), [UNDP](#), [Soil Health](#), [Biodiversity](#), [Paris Agreement](#).

**For Mains:** Status of forest and tree cover in India.

**Source:** [PIB](#)

### Why in News?

Recently, the **Ministry for Environment, Forest and Climate Change** released the **18th India State of Forest Report 2023 (ISFR 2023)**.

- ISFR is brought out by the [Forest Survey of India \(FSI\)](#) on a biennial basis since 1987.

### What are the Key findings of ISFR 2023?

- Forest and Tree Cover:** The total forest and tree cover of the country is **8,27,356.95 km<sup>2</sup>** which is **25.17%** of the geographical area (GA) of the country.
  - The total **Forest Cover** has an area of **7,15,342.61 km<sup>2</sup> (21.76%)** whereas the **Tree Cover** has an area of **1,12,014.34 km<sup>2</sup> (3.41%)**.

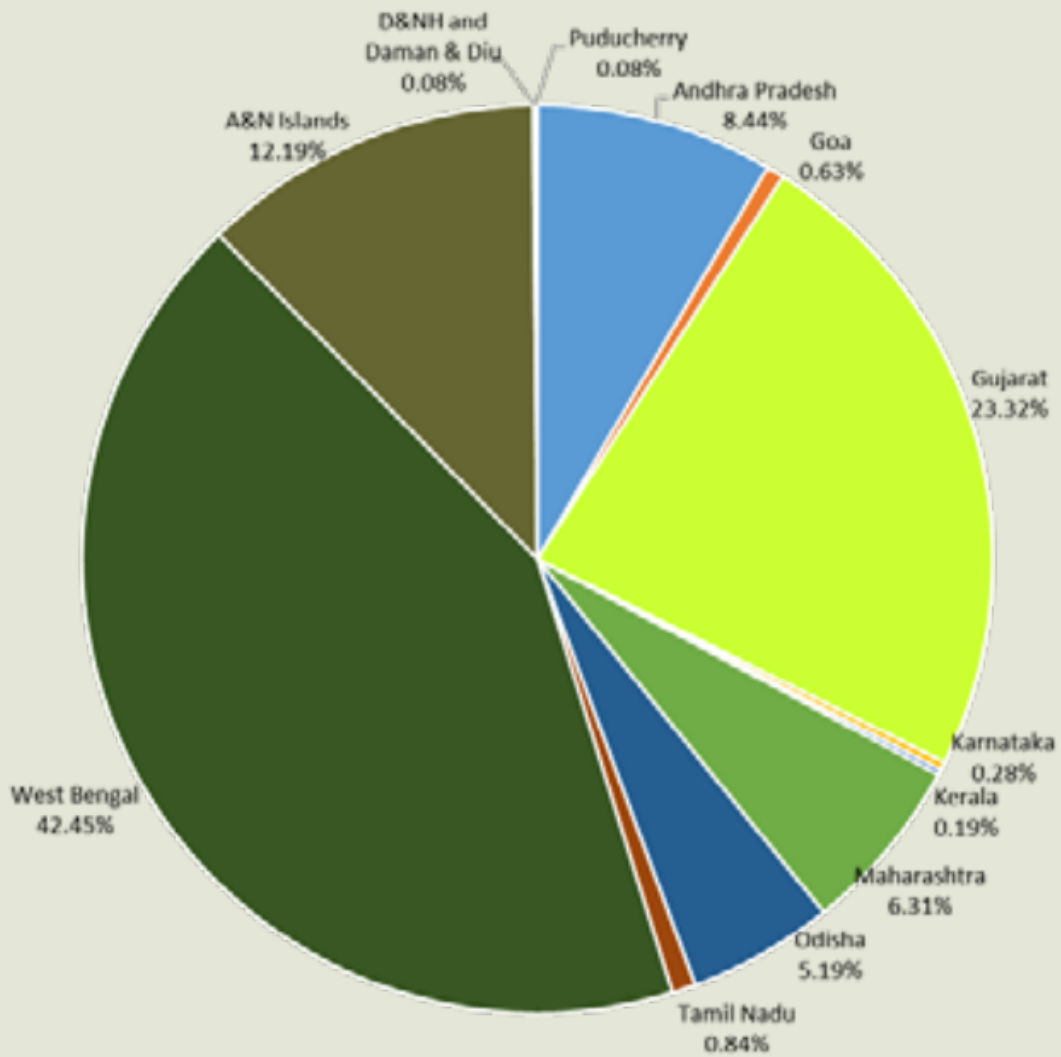
Class	Area (km <sup>2</sup> )	Percentage of GA
Forest Cover	7,15,342.61	21.76%
Tree Cover	1,12,014.34	3.41%
<b>Total Forest and Tree Cover</b>	<b>8,27,356.95</b>	<b>25.17%</b>
Scrub	43,622.64	1.33%
Non Forest	24,16,489.29	73.50%
<b>Geographical Area of the Country</b>	<b>32,87,468.88</b>	<b>100.00%</b>

- Increase in Forest and Tree Cover:** The country's forest and tree cover has increased by **1,445.81 km<sup>2</sup>**, with a **156.41 km<sup>2</sup> rise** in forest cover compared to 2021.
  - Maximum increase (Forest and Tree Cover): Chhattisgarh (684 sq km)** followed by Uttar Pradesh (559 sq km), Odisha (559 sq km) and Rajasthan (394 sq km).
  - Maximum Increase (Forest Cover): Mizoram (242 sq km)** followed by Gujarat (180 sq km) and Odisha (152 sq km).
  - Largest Decrease: Madhya Pradesh (612.41 km<sup>2</sup>)** followed by Karnataka (459.36

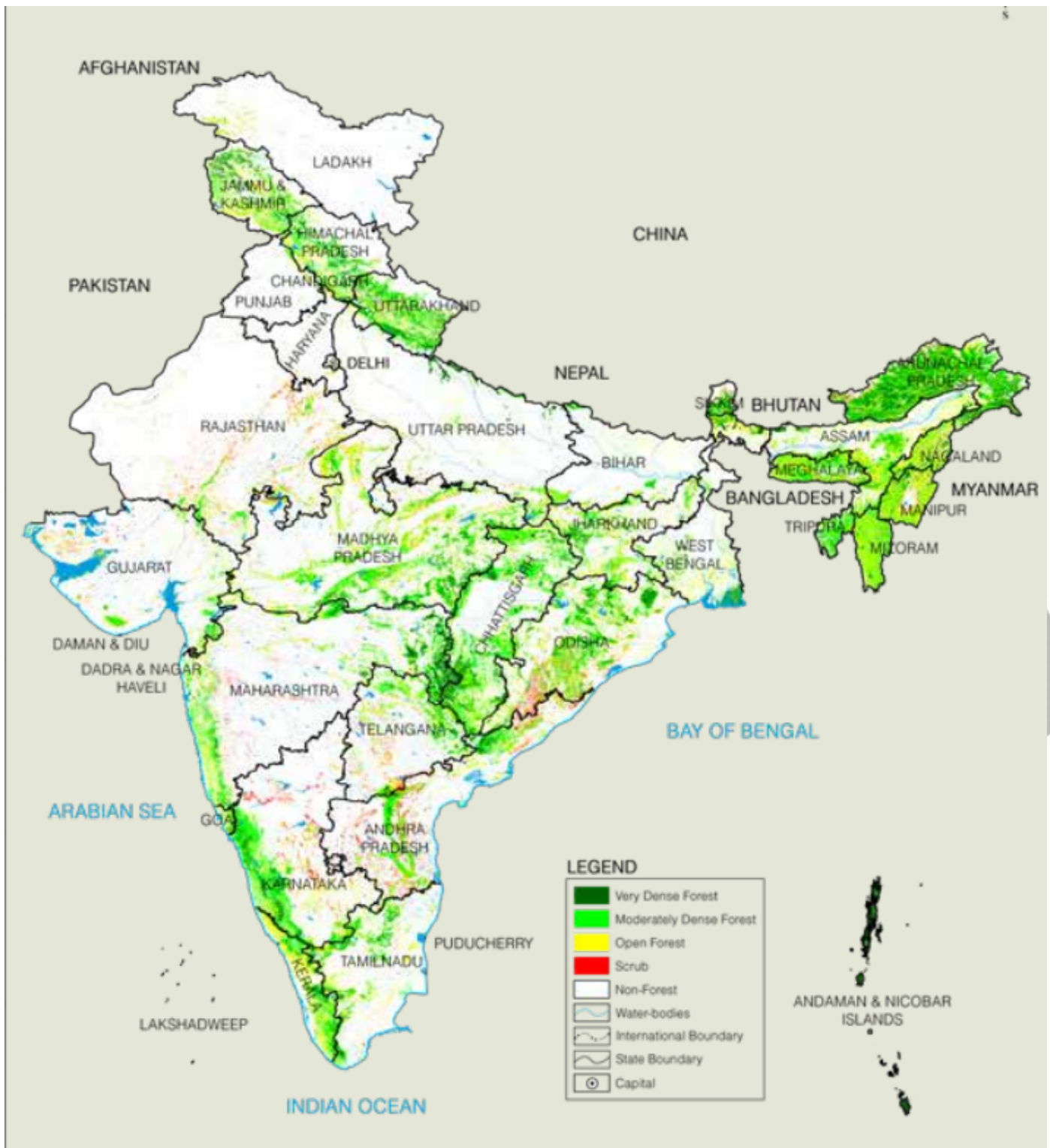
km<sup>2</sup>), Ladakh (159.26 km<sup>2</sup>), and Nagaland (125.22 km<sup>2</sup>).

- **Top Three States:** Area wise top three states having largest forest cover are **Madhya Pradesh** (77,073 sq km) followed by **Arunachal Pradesh** (65,882 sq km) and **Chhattisgarh** (55,812 sq km).
  - In terms of **percentage** of forest cover with respect to total geographical area, **Lakshadweep** (91.33%) has the highest forest cover followed by **Mizoram** (85.34%) and **Andaman & Nicobar Island** (81.62%).
- **High Forest Cover: 19 states/UTs** have **above 33%** of the geographical area under forest cover.
  - Out of **these, eight states/UTs** namely **Mizoram, Lakshadweep, A & N Island, Arunachal Pradesh, Nagaland, Meghalaya, Tripura, and Manipur** have forest cover **above 75%**.
- **Carbon Stock:** The country's forest **carbon stock** is estimated at **7,285.5 million tonnes**, with an **increase of 81.5 million tonnes** compared to 2021.
  - **Top 3: Arunachal Pradesh** (1,021 Mt) followed by Madhya Pradesh (608 Mt), Chhattisgarh (505 Mt) and Maharashtra (465 Mt).
  - India's carbon stock has reached **30.43 billion tonnes of CO<sub>2</sub> equivalent, exceeding the 2005 base year by 2.29 billion tonnes**, nearing the **2030 target of 2.5-3.0 billion tonnes**.
- **Regional Performance:** The **Western Ghats Eco-Sensitive Areas (WGESA)** covers **60,285.61 km<sup>2</sup>**, with **44,043.99 km<sup>2</sup> (73%)** under forest cover.
  - The total forest and tree cover in the **Northeastern region** is **1,74,394.70 km<sup>2</sup>**, which is **67%** of the geographical area of these states.
- **Mangrove Cover:** India's **mangrove** cover is **4,991.68 km<sup>2</sup>**, representing **0.15%** of the total geographical area, with a **net decrease of 7.43 km<sup>2</sup>** since 2021.
  - **Gujarat** saw a **decrease of 36.39 km<sup>2</sup>** in mangrove cover, while **Andhra Pradesh** and **Maharashtra** experienced increases of **13.01 km<sup>2</sup>** and **12.39 km<sup>2</sup>**, respectively.

### Mangrove Cover 2023



- **Forest Fire:** The top three states with the most fire incidents in the 2023-24 season are **Uttarakhand, Odisha, and Chhattisgarh.**



## Note

- **Paris Agreement:** In the [Nationally Determined Contribution \(NDC\)](#) commitments made at the Paris Climate Change Agreement, **India** has resolved to create an **additional carbon sink of 2.5 to 3 billion tonnes of CO<sub>2</sub> equivalent** through additional forest and tree cover by **2030**.
- **Bonn Challenge:** India has also pledged to bring in **26 million hectares** of [degraded land](#) under **restoration by 2030**, as part of [Bonn Challenge](#).
- **Livelihood:** India's forests support the livelihoods of about **17% of the global human population** and **18% of the world's total livestock**.
- **Global Standing:** As per [Global Forest Resource Assessment \(GFRA, 2020\)](#) published by [FAO](#), India is ranked amongst the **top 10** countries of the world, in terms of **forest area** and holds **3rd position** for **highest annual net gain in forest cover** between 2010-2020.

## Forest Survey of India

- **Established:** Established on **1st June 1981**, succeeding the **Pre Investment Survey of Forest Resources (PISFR)** initiated in **1965**.
  - In **1976**, the **National Commission on Agriculture (NCA)** recommended establishing a **National Forest Survey Organization**, leading to the creation of **FSI**.
  - PISFR was initiated in **1965** by the Government of India with the sponsorship of **FAO** and **UNDP**.
- **Parent Organization:** **Ministry of Environment and Forests**, Government of India.
- **Primary Objective:** To **assess and monitor the forest resources** of India regularly.
  - In addition, it is also engaged in providing the services of **training, research and extension**.
- **Functioning:** FSI has headquarters at **Dehradun** and has pan India presence with four regional offices at **Shimla, Kolkata, Nagpur and Bangalore**.
  - The Eastern zone has a sub centre at **Burnihat (Meghalaya)**.

## What are the Trend in Forestry Parameters Between 2013-2023?

- **Increase in Greenery:** The forest cover of the country has shown an **increase** of **16,630.25 km<sup>2</sup>**.
  - The **tree cover** has shown an increase of **20,747.34 km<sup>2</sup>**.
  - **Mangrove** cover of the country has increased by **296.33 km<sup>2</sup>**.
- **Soil Health:** There is a general improvement in **soil health** (**87.16%** of shallow to deep soil as against **83.53% in 2013**) reflected by improvement in humus.
  - The **soil organic carbon** has increased from **55.85 tonnes per hectare to 56.08 tonnes per hectare**.
    - Soil organic carbon is **carbon contained in soil organic matter** which contributes to **soil aggregation, enhancing soil structure and stability**.
- **Biotic influences:** Biotic influences on forests have also come down to **26.66% from 31.28% in 2013** which indicates **improved floral biodiversity**, and improved surroundings for **faunal biodiversity**.
  - Biotic influences are any influence of living organisms. In forests, the biotic influences could include **grazing, browsing, man-made fire, pollarding, illicit felling, and lopping**.

## Conclusion

The **18<sup>th</sup> India State of Forest Report 2023** highlights **positive trends** in forest and tree cover, carbon stock, and soil health, while addressing challenges like forest fires and mangrove loss. India's commitment to global climate goals, such as the **Paris Agreement** and **Bonn Challenge**, reinforces its ongoing conservation efforts.

### **Drishti Mains Question:**

Analyze the key findings of the 18th India State of Forest Report 2023 (ISFR 2023) and assess its implications for India's environmental sustainability and climate change goals.

## UPSC Civil Services Examination Previous Year's Question (PYQs)

### **Prelims**

**Q. Consider the following States: (2019)**

1. Chhattisgarh
2. Madhya Pradesh



3. Maharashtra
4. Odisha

**With reference to the States mentioned above, in terms of percentage of forest cover to the total area of State, which one of the following is the correct ascending order?**

- (a) 2-3-1-4
- (b) 2-3-4-1
- (c) 3-2-4-1
- (d) 3-2-1-4

**Ans: (c)**

**Q. A particular State in India has the following characteristics: (2012)**

1. It is located on the same latitude which passes through northern Rajasthan.
2. It has over 80% of its area under forest cover.
3. Over 12% of forest cover constitutes Protected Area Network in this State.

**Which one among the following States has all the above characteristics?**

- (a) Arunachal Pradesh
- b) Assam
- (c) Himachal Pradesh
- (d) Uttarakhand

**Ans: (a)**

### **Mains**

**Q. Examine the status of forest resources of India and its resultant impact on climate change (2020).**

**Q. Discuss the causes of depletion of mangroves and explain their importance in maintaining coastal ecology (2019)**