



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 km²** which is **25.17%** of the geographical area (GA) of the country.
 - The total **Forest Cover** has an area of **7,15,342.61 km² (21.76%)** whereas the **Tree Cover** has an area of **1,12,014.34 km² (3.41%)**.

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

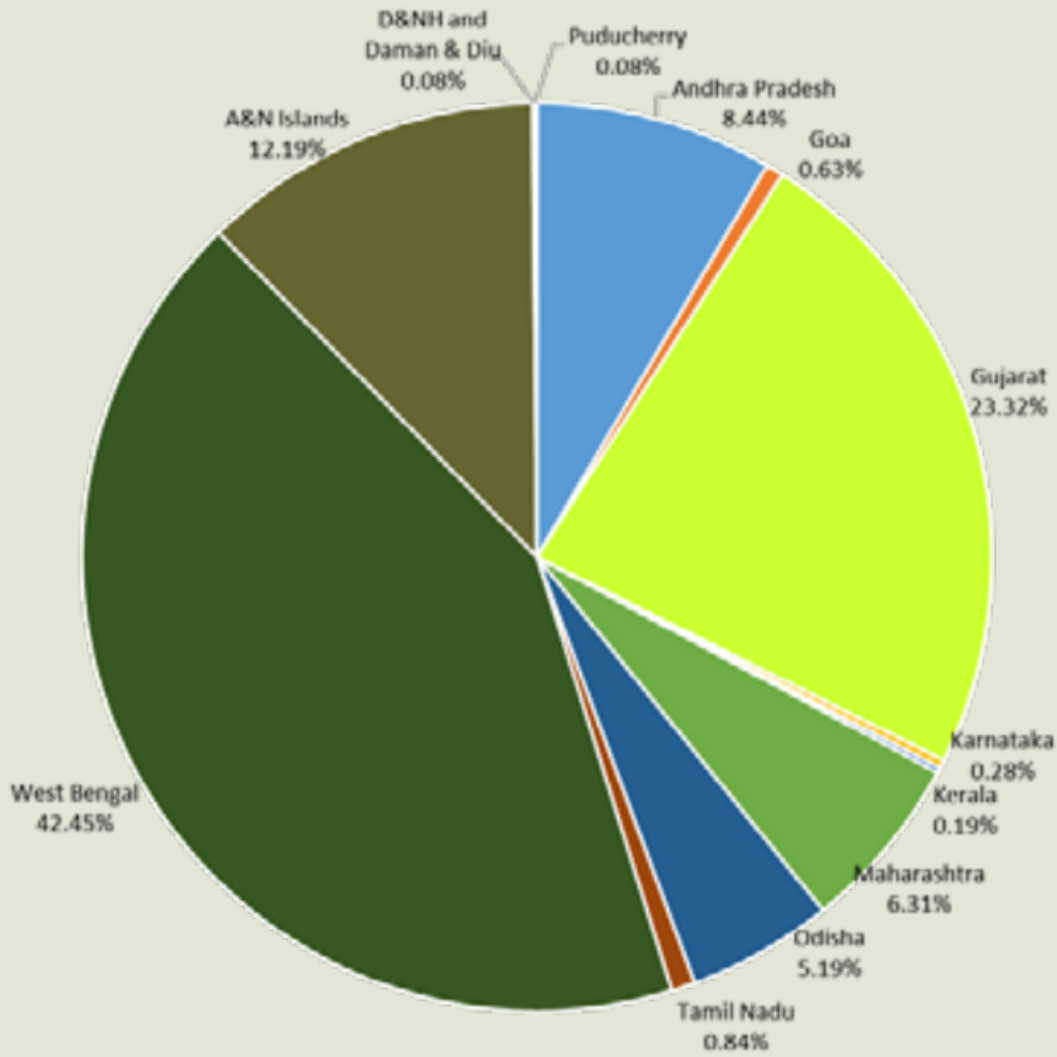
- Increase in Forest and Tree Cover:** The country's forest and tree cover has increased by **1,445.81 km²**, with a **156.41 km² rise** in forest cover compared to 2021.
 - Maximum increase (Forest and Tree Cover): Chhattisgarh (684 sq km)** followed by Uttar Pradesh (559 sq km), Odisha (559 sq km) 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 km²)** followed by Karnataka (459.36

km²), Ladakh (159.26 km²), and Nagaland (125.22 km²).

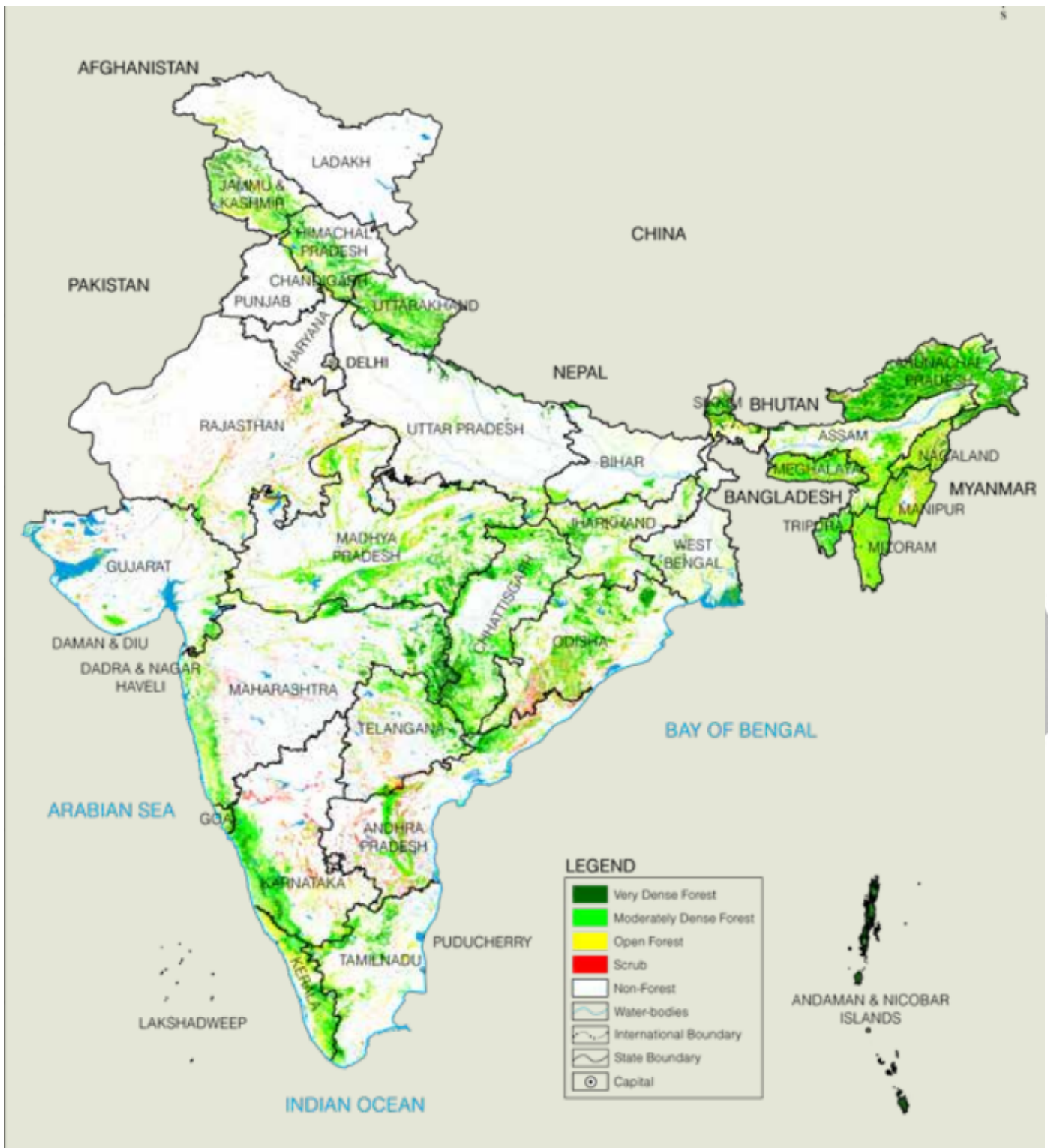
- **Top Three States:** Area wise top three states having largest forest cover are **Madhya Pradesh** (77,073 sq km) followed by **Arunachal Pradesh** (65,882 sq km) and **Chhattisgarh** (55,812 sq km).
 - In terms of **percentage** of forest cover with respect to total geographical area, **Lakshadweep** (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 CO₂ 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 km²**, with **44,043.99 km² (73%)** under forest cover.
 - The total forest and tree cover in the **Northeastern region** is **1,74,394.70 km²**, which is **67%** of the geographical area of these states.
- **Mangrove Cover:** India's **mangrove** cover is **4,991.68 km²**, representing **0.15%** of the total geographical area, with a **net decrease of 7.43 km²** since 2021.
 - **Gujarat** saw a **decrease of 36.39 km²** in mangrove cover, while **Andhra Pradesh** and **Maharashtra** experienced increases of **13.01 km²** and **12.39 km²**, 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 CO₂ 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 km²**.
 - The **tree cover** has shown an increase of **20,747.34 km²**.
 - **Mangrove** cover of the country has increased by **296.33 km²**.
- **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 **18th 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)