

INTERNATIONAL DAY OF FORESTS - 2024

Uncontrolled Blazes: The Menace of Forest Fires in India

Forest fires, uncontrolled blazes that ravage vast expanses of woodland, pose a grave threat to both fauna and flora, wreaking havoc on biodiversity and ecological balance within regions. These fires disrupt natural harmony and imperil habitats and precious life forms. In recent years, incidents of forest fires have surged, largely attributable to climate change exacerbated by human activity. Approximately 95 percent of forest fires in India stem from human actions (Forest Fire in India, 2018 by FRI, Dehradun) with the remaining 5 percent initiated by natural phenomena such as stone rolling, bamboo rubbing, or lightning strikes. (Source: ForumIAS.com)

Forest Fire Causes:

- Anthropogenic causes:**
- Throwing Smoke butts irresponsibly
 - Campfires
 - Burning Debris
 - Fireworks
- Natural Causes:**
- Lightning
 - Volcanic eruption
 - Heat patterns

Source: State Forest Report 2021 by Forest Survey of India

Impact of forest fires on ecosystems:

- Loss of Ecosystems and Biodiversity
- Forest Degradation
- Air Pollution
- Global Warming
- Soil Degradation
- Destruction of Watersheds

Source: ForumIAS.com



File photo of a fire at the Bandipur National Park in 2019. Naveen N Kadalaveni o/Wikimedia Commons (CC BY-SA 4.0)



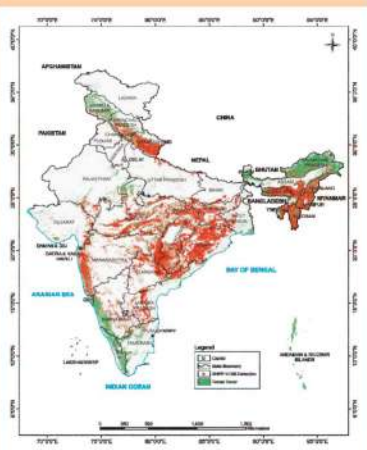
PROPORTION OF TREE COVER LOSS DUE TO FIRES IN INDIA
 Fires were responsible for 0.80% of tree cover loss in India between 2019 and 2022
 Source: Globalforestwatch.org

State	Tree cover loss (in ha)
Odisha	235
Arunachal Pradesh	152
Manipur	117
Nagaland	103
Meghalaya	83

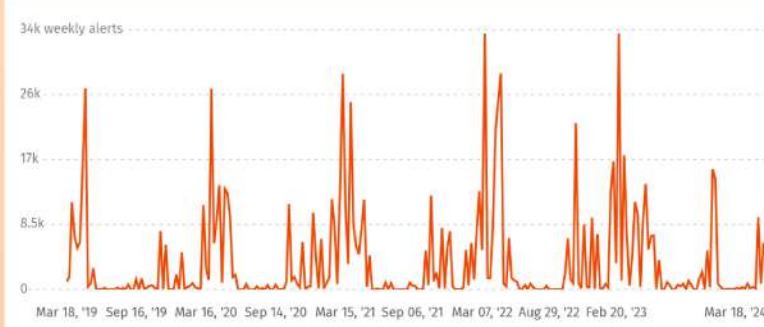
TOP 5 STATES WITH MOST TREE COVER LOSS DUE TO FIRES IN INDIA
 From 2019 to 2022, Odisha had the highest rate of tree cover loss due to fires with an average of 235 ha lost per year.
 Source: Globalforestwatch.org



FIRE ALERTS IN INDIA
 There were 2,951,315 VIIRS fire alerts reported in India between 19th of March 2019 and 20th of March 2024, of which 3.0% were high confidence alerts.
 Source: Globalforestwatch.org



Map showing SNPP-VIIRS based hot spots detected during 2020-2021 forest fire season
 Source: India State of Forest Report 2021 by FSI, Dehradun



HISTORICAL FIRE ALERTS IN INDIA
 Between 18th of March 2019 and 18th of March 2024 India experienced a total of 923,875 VIIRS Alerts fire alerts.
 Source: Globalforestwatch.org

Steps to Prevent Forest Fire:

- Educate and Raise Awareness
- Follow Regulations and Guidelines
- Practice Fire Safety
- Demarcate of forest land development of clear shoulder area between habitat & forest land
- Be Vigilant During Dry Seasons
- Practice Responsible Land Management
- Monitor and Report Suspicious Behavior
- Engage the Community
- Promote Fire-Resistant Landscaping
- Invest in Firefighting Resources

Conclusion:

Forest fires pose a major threat to ecosystems, biodiversity, and human well-being. To tackle this issue, we must take proactive steps to prevent and mitigate fires, especially those caused by human actions. By raising awareness, promoting responsible behavior, and implementing proactive measures, we can reduce fire risks and preserve our natural resources. Strengthening fire safety culture, enforcing regulations, and involving communities in prevention are vital steps toward protecting forests for present and future generations. Addressing root causes like climate change and human encroachment is crucial for long-term forest health and resilience.

Afforestation activities across India

INTRODUCTION TO AFFORESTATION

Afforestation refers to planting trees and establishing forests in areas where they did not exist. It is a crucial strategy for combating deforestation and mitigating the impacts of climate change. By converting barren lands, degraded ecosystems, and unused land into forested areas, afforestation is vital to restoring ecological balance and promoting sustainability.

The importance of afforestation cannot be overstated, especially in the face of increasing deforestation rates and environmental degradation. Here are some key reasons why afforestation is essential:

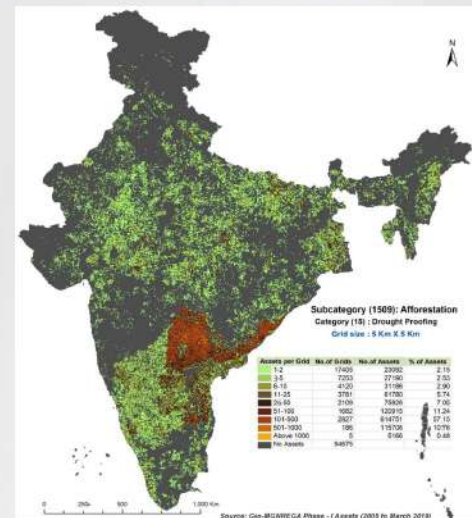
- **Combatting Deforestation**
- **Climate Change Mitigation**
- **Soil Conservation**
- **Biodiversity Preservation**
- **Water Resource Management**

Afforestation Initiatives: The Government of India has launched several initiatives and programs to promote afforestation and enhance green cover across the country. These include:

- **National Afforestation Programme (NAP):** Implemented by the Ministry of Environment, Forest and Climate Change (MoEFCC), NAP aims to increase forest and tree cover, restore degraded ecosystems, and improve environmental quality.
- **Green India Mission (GIM):** Launched in the National Action Plan on Climate Change, GIM focuses on afforestation, reforestation, and sustainable forest management to enhance ecosystem services and biodiversity conservation.
- **Compensatory Afforestation Fund Management and Planning Authority (CAMPA):** Established to manage funds collected for compensatory afforestation and reforestation projects, CAMPA supports afforestation activities on degraded and non-forested land.



National level afforestation under MGNREGA rendered as gridded (5 km) classification based on Phase-I Geo-MGNREGA Geo-tags from Bhuvan Web-portal :
<https://link.springer.com/article/10.1007/s12524-022-01536-5>



Conclusion: Afforestation in India, under the MGNREGA scheme, benefits from spatial analysis, facilitating monitoring, gap identification, and sustainable rural development toward achieving SDGs.

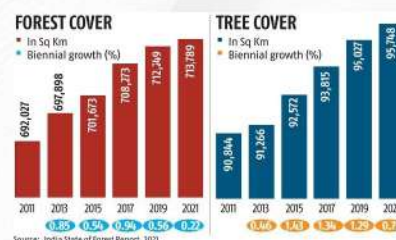
Impact and Benefits of Afforestation

Afforestation in India has multifaceted positive impacts on the environment, economy, and society, contributing to sustainable development and improved quality of life for millions. Some key benefits include:

- **Environmental Impact:** Air Quality Improvement, Soil conservation, Biodiversity Preservation, Carbon Sequestration, Water Resource Management.
- **Economic Impact:** Job creation, Timber and Non-timber Forest Products, Ecotourism and Recreation.
- **Social Impact:** Health and Well-being, Community, Education and Awareness

Types of Afforestation Projects

- **Reforestation of Degraded Forests and Barren Lands**
- **Plantation Drives in Urban and Rural Areas**
- **Agroforestry Initiatives**
- **Community-led afforestation programs**



Source: India State Forest Report 2021

Link: [View](#)

Success Stories of Afforestation in India under Government

- plants the 4 Crores tree under the All-India Tree Plantation Campaign of the Ministry of Home Affairs at the CRPF Group Center in Greater Noida, Uttar Pradesh (Ref: <https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1950131>)
- Harit Vasai Project, Maharashtra
- Araku Valley Social Forestry Project, Andhra Pradesh
- Jadav Payeng's Forest, Assam
- Anand Van, Gujarat

References:

[India State of Forest Report \(ISFR\)](#) - Ministry of Environment, Forest and Climate Change (MoEFCC), [National Forest Policy, \(1988\)](#) - Ministry of Environment, Forest and Climate Change (MoEFCC), United Nations Development Programme (UNDP) India, Centre for Science and Environment (CSE)