

Forest Fires in Himachal Pradesh

(The Hindu, 20/06/24)

Himachal Pradesh (H.P.) is witnessing widespread forest fires across the region. According to the Himachal Pradesh Forest department, there have been a total of 1,684 forest fires since April 15.

- These fires have damaged a total of 17,471 hectares of forest land, resulting in significant loss to wildlife.
- From 2001 to 2023, H.P. has lost 957 hectares of tree cover from fires and 4.37 thousand hectares from all other drivers of loss.

How do forest fires start in the State?

- Himalayan fires are most frequent during the dry pre-monsoon summer due to low snowmelt water. The amount of moisture in the air, especially during pre-monsoon storms, directly affects fire severity – **less moisture means worse fires.**
- **Human activities** such as unattended campfires, discarded cigarettes etc., is another reason for forest fires.
- But, the primary causes of these forest fires are **faulty forestry practices**, and treating forests from a utilitarian perspective, excluding people's participation.

These fires are also a major source of pollutants, including **black carbon**, which significantly contribute to glacier melt in the Himalayas and negatively influences the regional climate.

Have the Himalayan forests undergone a transformation?

The Himalayan forests have been systematically transformed over the last two centuries.

A crucial watershed moment in Indian forestry began with the **construction of railways in the 1850s** during Colonial time period.

- 80,000 km of railway tracks from 1853 to 1910 led to deforestation.
- 6.5 million Deodar trees were used for railway sleepers (1869-1885).
- Resin tapping (usually from Pine trees) increased dramatically (from 260,000 to 2.1 million trees, 1910-1920).
- State forestry replaced valuable Banj oak (absorb high content of rainwater leading to better for water retention) with commercially valuable Chir pine (increased to 17.8% of Himachal Pradesh forests), which is more prone to fires.

What needs to be done?

- **Democratisation of forests** is essential to ensure that people and communities who have lived in and around forests are made part of the forest **management process**.
 - Build **mixed forestry** and remove pine trees;
 - Ensure that both scientific and community knowledge converge and forest management is conducted in a **participatory** manner (as villages are the first responders in case of fires)
 - Implement check dams and other methods to revive water springs
- Create **environmental services** at the village level
- Articulate their case with the ongoing **16th Finance Commission**, seeking help apart from **disaster mitigation funds**.

Can you answer the following question?

How has the historical management of Himalayan forests, including colonial era practices, impacted the vulnerability of these forests to wildfires?

Indian Railways in Crisis:

The recent collision near Siliguri in West Bengal, resulting in nine fatalities and over 40 injuries, underscores the chronic problems plaguing Indian Railways.

- Since 1995, Indian Railways has seen seven major accidents, claiming over 1,600 lives, highlighting severe systemic issues.

What factors contribute to these accidents?

- **Aging Infrastructure:** Outdated tracks, signaling systems, and locomotives increase the risk of malfunctions and derailments.
- **Human Error:** Inadequate training and long working hours for railway staff contribute to human errors, which are often a significant factor in accidents.
- **Insufficient Safety Measures:** Lack of advanced safety technologies and inadequate implementation of existing safety protocols exacerbate the problem.
- **Poor Maintenance:** Inadequate maintenance of tracks and rolling stock leads to frequent mechanical failures.
- **Overcrowding and Overutilization:** The railway system is often stretched beyond its capacity, leading to increased wear and tear and higher chances of accidents.
- **Speed vs. Safety:** The pursuit of faster travel times without sufficient upgrades to infrastructure creates a safety compromise.

What are the main problems facing Indian Railways?

Indian Railways struggles with declining ridership, stagnation in freight volumes, and competition from road and air transport. It also faces issues with:

- **Slow speeds and delays:** Average train speeds haven't improved, causing passenger dissatisfaction and impacting freight efficiency.
- **Safety concerns:** Frequent accidents highlight flaws in safety management and infrastructure maintenance.
- **Modernization failures:** Despite plans, Indian Railways hasn't effectively increased speeds, improved punctuality, or implemented advanced technologies.
- **Inconsistent policies and lack of direction:** Frequent leadership changes and shifting priorities hinder long-term development plans.
- **Operational inefficiencies:** Outdated infrastructure and practices combined with a reliance on manual processes create inefficiencies.

What are the potential solutions to prevent future accidents?

- **Comprehensive Modernization:** Accelerating the pace of infrastructure modernization, including tracks, bridges, and signaling systems.
- **Capacity Expansion:** Expanding capacity to reduce overcrowding and overutilization of the existing network.
- **Human Resource Management:** Improving working conditions and training programs for railway staff to minimize human errors.
- **Enhanced Maintenance:** Regular and thorough maintenance of all components of the railway system.
- **Advanced Safety Technologies:** Implementing state-of-the-art safety technologies like Kavach anti-collision system, such as automatic train protection (ATP) systems.
- **Regular Audits:** Ensuring strict adherence to safety protocols and regular audits to enforce compliance.

- **Safety Culture:** Fostering a culture that prioritizes safety throughout the railway organization is essential.