



Mains Practice Question

Q. Forest fires have become a recurring environmental issue with severe implications. Along with the causes and consequences of forest fires, discuss the measures to mitigate the effect of such natural disasters. (150 words)

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Approach:

- Start your answer with defining forest fires and their causes
- In body section, mention the consequences of them and measures to mitigate
- Conclude with way forward

Introduction:

- Forest fires are a recurring environmental issue with severe implications. Recently, Goa has witnessed forest fires. The ISFR 2021 estimates that more than 36% of the country's forest cover is prone to frequent forest fires, 6% is 'very highly' fire-prone, and almost 4% is 'extremely' prone. They can cause widespread damage to property, infrastructure, and ecosystems. They can also release harmful pollutants into the atmosphere and pose a risk to human health and safety.

Causes of Forest Fire:

- **Natural:** Lightning is the most prominent cause which set trees on fire. Spontaneous combustion of dry vegetation and volcanic activities also cause forest fires.
- **Man-Made:** Fire is caused when a source of fire like naked flame, cigarette or bidi, electric spark or any source of ignition encounters inflammable material.

Body:

The consequences of forest fires can be devastating. They can cause:

- **Property damage:** Forest fires can destroy homes, businesses, and other structures.
- **Infrastructure damage:** Forest fires can damage roads, bridges, and other infrastructure.
- **Ecosystem damage:** Wildfires damage the habitat of animals, causing them to wander in cities increase human- wildlife conflicts. Also, many die in the fires, unable to escape.
- **Air pollution:** Forest fires can release harmful pollutants into the atmosphere, such as smoke and ash. These pollutants can cause respiratory problems and can even be deadly.
- **Human health risks:** Smoke and poisonous gas emissions can result in significant health issues in humans.

Measures to Mitigate Forest Fires:

- **Avoid Open Burning:** To mitigate the effect of forest fires, it is important to prevent them from happening in the first place. This can be done by avoiding open burning on windy or dry days, properly discarding cigarettes and maintaining electrical power lines more diligently.
 - When open burning is necessary for waste disposal, it must be done by qualified companies

who meet all safety requirements.

- **Create Fire Breaks:** Fire breaks are areas where vegetation has been removed, creating a gap that can slow or stop the spread of a fire.
- **Monitor and Manage Forests:** Monitoring forests and managing them appropriately can help prevent fires from starting or spreading.
- **Early Detection and Rapid Response:** Early detection of a forest fire is critical for effective mitigation.
 - The Forest Survey of India (FSI) is using satellite imaging technology (like MODIS) to analyse forest fire affected areas and boost prevention.
- **Fuel Management:** Reducing the accumulation of dead trees, dry vegetation, and other combustible materials through activities such as thinning and selective logging.
- **Firewise Practices:** Safe practices must be adopted in areas near forests viz. factories, coal mines, oil stores, chemical plants and even in household kitchens.
- **Practice Controlled Burning:** Controlled burning involves setting small fires in a controlled environment.
- **Educate Campers:** Visitors and Campers should also be educated on forest fires so they can minimize the risk of unwanted situations.

Conclusion:

Forest fires have severe implications caused by natural or human factors. Their consequences include loss of biodiversity, air pollution, soil erosion, and climate change. Prevention measures and effective firefighting are crucial, as well as reforestation and sustainable forest management practices. Addressing climate change is also important in mitigating their long-term impacts.

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