



Forest Fires

For Prelims: Forest Fires, Climate Change

For Mains: Forest Fires and its Precautions, Government Policies and Interventions, Environment Pollution and Degradation

Why in News?

In recent weeks, [Forest Fires](#) have ravaged Europe, especially in southwest Europe.

- There was blazing heatwave destroying thousands of acres of land, forcing people to leave their homes and killing several emergency personnel.

What is forest Fire?

- **About:**
 - Also called **bush or vegetation fire** or wildfire, it can be described as any **uncontrolled and non-prescribed combustion or burning of plants in a natural setting** such as a forest, grassland, brush land or tundra, which consumes the natural fuels and spreads based on environmental conditions (e.g., wind, topography).
 - There are **three conditions** that need to be present in order for a wildfire to burn: **Fuel, Oxygen, and a Heat source.**
- **Causes:**
 - **Natural Causes:**
 - any forest fires start from natural causes such as [lightning](#) which set trees on fire.
 - However, rain extinguishes such fires without causing much damage. High atmospheric temperatures and dryness (low humidity) offer favourable circumstance for a fire to start.
 - **Man-made Causes:**
 - Fire is caused when a source of fire like **naked flame, cigarette or bidi, electric spark or any source of ignition comes into contact with inflammable material.**

How are forest fires Classified?

- **Surface Fire:**
 - A forest fire may burn primarily as a surface fire, **spreading along the ground as the surface litter (senescent leaves and twigs and dry grasses etc) on the forest floor** and is engulfed by the spreading flames.
- **Underground Fire:**
 - The fires of **low intensity, consuming the organic matter beneath and the surface litter of forest floor are sub-grouped as underground fire.** In most of the dense forests a thick mantle of organic matter is found on top of the mineral soil.

- These fires usually spread entirely underground and burn for some meters below the surface.
- This fire spreads very slowly and in most of the cases it becomes very hard to detect and control such type of fires.
- They may continue to burn for months and destroy vegetative cover of the soil.
- **Ground Fire:**
 - These fires are fires in the sub surface organic fuels, such as **duff layers under forest stands, Arctic tundra or taiga, and organic soils of swamps or bogs.**
 - There is no clear distinction between underground and ground fires.
 - The smouldering underground fires sometime changes into Ground fire.
 - This **fire burns root and other material on or beneath the surface i.e., burns the herbaceous growth on forest floor** together with the layer of organic matter in various stages of decay.
 - They are more damaging than surface fires, as they can destroy vegetation completely. Ground fires burn underneath the surface by smouldering combustion and are more often ignited by surface fires.

What about Forest Fire Incidents in India?

- **About:**
 - There has been a **ten-fold increase in forest fires in the past two decades**, and more than 62% of Indian states are prone to high-intensity forest fires.
 - Andhra Pradesh, Assam, Chhattisgarh, Odisha and Maharashtra **are the most prone to high-intensity forest fire events** caused by rapid [change in climate](#).
 - **Mizoram has had the highest number of forest fire incidences** in the last two decades, with more than 95% of its districts being forest fire hotspots.
 - **Districts that were earlier flood prone have now become drought prone** due to a “swapping trend” as a result of climatic changes.
 - **More than 75 % of Indian districts are extreme climate event hotspots**, and more than 30 % of districts are extreme forest fire hotspots.
- **Initiatives Taken:**
 - [National Action Plan for Forest Fires \(NAPFF\)](#), was started in 2018 with the goal of **reducing forest fires by informing, enabling, and empowering forest fringe communities** and incentivizing them to collaborate with state forest departments.
 - [The Forest Fire Prevention and Management Scheme \(FPM\)](#) is the only government-sponsored programme dedicated to assisting states in dealing with forest fires.

What are the Measures needed to Overcome Forest Fires?

- Fire could be prevented in the summer through the removal of forest litter all along the forest boundary.
- **The creation of a Forest line could** prevent fire from breaking into the forest from one compartment to another.
- The best way to control a forest fire is therefore, to prevent it from spreading, which can be done by **creating firebreaks in the shape of small clearings** of ditches in the forests.
- Need to adopt safe practices in areas near forests viz. factories, coalmines, oil stores, chemical plants and **even in household kitchens**.
- Also, to incorporate fire reducing and firefighting techniques and equipment.

[Source: TH](#)