



## 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](#)