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News: Forest fires

- Recently, Forest Fires have been raging in the Coonoor forest range in the Nilgiris in Tamil Nadu.
- The Indian Air Force joined the ongoing firefighting efforts of the state forest department, deploying a Mi-17 V5 helicopter to conduct multiple “Bambi Bucket” operations.

Forest fire

- Forest fire, 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, brushland or tundra, which consumes the natural fuels and spreads based on environmental conditions (e.g., wind, topography).
- A wildfire requires three essential elements to sustain combustion like Fuel, Oxygen, and a Heat source.

Classification

- **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/Zombie Fire:** The fires of low intensity, consuming the organic matter beneath and the surface litter of the forest floor are sub-grouped as underground fires. 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 cases it becomes very hard to detect and control such types of fires.
- They may continue to burn for months and destroy the vegetative cover of the soil.
- **Canopy or Crown Fires:** These occur when fire spreads through the upper canopy of trees, often fueled by high winds and dry conditions. They can be particularly intense and difficult to control.
- **Controlled Deliberate Fires:** In some cases, controlled deliberate fires, also known as prescribed burns or bushfires, are intentionally set by forest

management agencies to reduce fuel loads, mitigate the risk of uncontrolled wildfires, and promote ecosystem health.

- These controlled burns are carefully planned and executed under specific conditions to minimize risks and maximize benefits to the forest ecosystem.

Bambi Bucket

- The Bambi Bucket, also called a helicopter bucket or a helibucket, is a specialised container that is suspended by cable under a chopper, and which can be filled by lowering into a river or pond before being flown above a fire and discharged aerially by opening a valve at the bottom of the bucket.
- The Bambi Bucket is especially helpful in fighting wildfires that are difficult or impossible to reach from the ground. Around the world, helicopters are frequently commissioned to fight forest fires.
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