

Wildfires around the World | Wildfires in California
2018 | Wildfires and Climate Change | By Priyadarshna
Jain

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Wildfires(Forest Fires): Cause and Consequences| Major Wildfires in 2018

**:Presented By:
Priyadarshana Jain**

What is a forest fire??



A forest fire is an uncontrolled fire occurring in nature.

It started out of a lightning strike, or people carelessly starting it, or accidentally, or even arson, that went un-noticed and got out of hand.

These fires sometimes burn for days and weeks. They can wipe out an entire forest and destroy almost every organic matter in it.

Wild fires can also be termed forest fires, grass fires, peat fires and bush fires depending on type of vegetation being burnt.

These fires tend to thrive in very warm and dry climates, rather than the thick, moist rainforest types.

They destroy biotic (animal, tree, bacteria) and abiotic (climate, rocks, soil) factors of a forest ecosystem.

Causes of a forest fire

Natural causes:

Natural causes account for about 10% of all wildfires

Nevertheless, wildfires occurring as a result of natural causes vary from one region to another depending on the vegetation, weather, climate and topography

Volcanic eruption:

Hot magma in the earth's crusts is usually expelled out as lava during a volcanic eruption.

The hot lava then flows into nearby fields or lands to start wildfires.



Causes of a forest fire

Natural causes:

Lightning:

A good number of wildfires were started by lightning. When lightning strikes, it can produce a spark. It can strike trees, power cables, rocks and many other things and just set them off.

The type of lightning associated with wildfires is known as **hot lightning**. It has less voltage currents but strikes repeatedly for longer periods. As such, fires are normally initiated by the persistent hot lightning bolts that strike rocks, trees, power cables or any other thing that might ignite a fire.



Causes of a forest fire

Human Causes

It is estimated that as many as nine out of ten forest fires are caused by humans.

Unattended Campfires: Unattended campfires can put things out of control and can cause wildfires.

Burning Debris: It is pretty common to burn yard waste, it may cause fires at many places when things go out of hand. Winds can cause flames of a burning debris to spread into forests or farms or fields.

Machinery Accidents: Machinery accidents such as the explosion of gas balloons and car crashes can ignite wildfires.



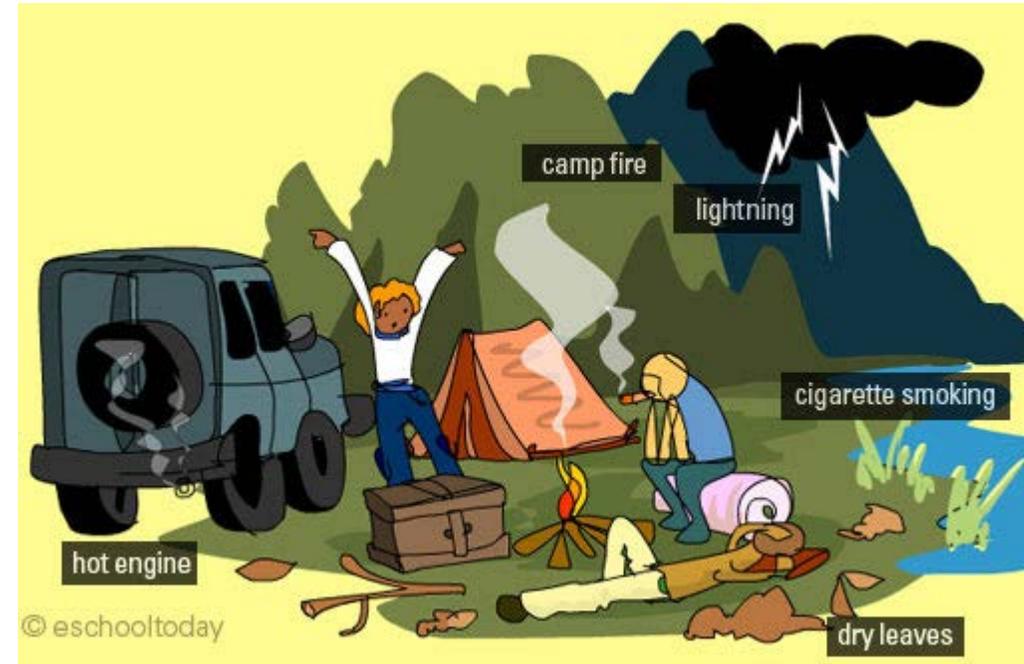
Causes of a forest fire

Equipment Failure or Engine Sparks: A running engine can spew hot sparks. Car crashes have been known to start fires quickly. Small engine sparks can give way to high flames if that vehicle is operating in a field or a forest.

Cigarettes: It is common for people to throw the cigarette bud on the ground knowing that it is still burning.

Fireworks: If not handled properly that may end up as flames in unwanted territory.

Arson: Arson may account for 30% of all wildfire cases.



Causes of a forest fire

Human causes:

human development patterns:

We like to live in beautiful places and oftentimes this includes building our homes and communities among the flammable vegetation.

In these flammable environments, when a wildfire occurs and buildings begin to burn, vegetation can become irrelevant.

This is due to the fact that buildings, once ignited, are an incredible source of heat that can spread fire to neighbouring buildings.



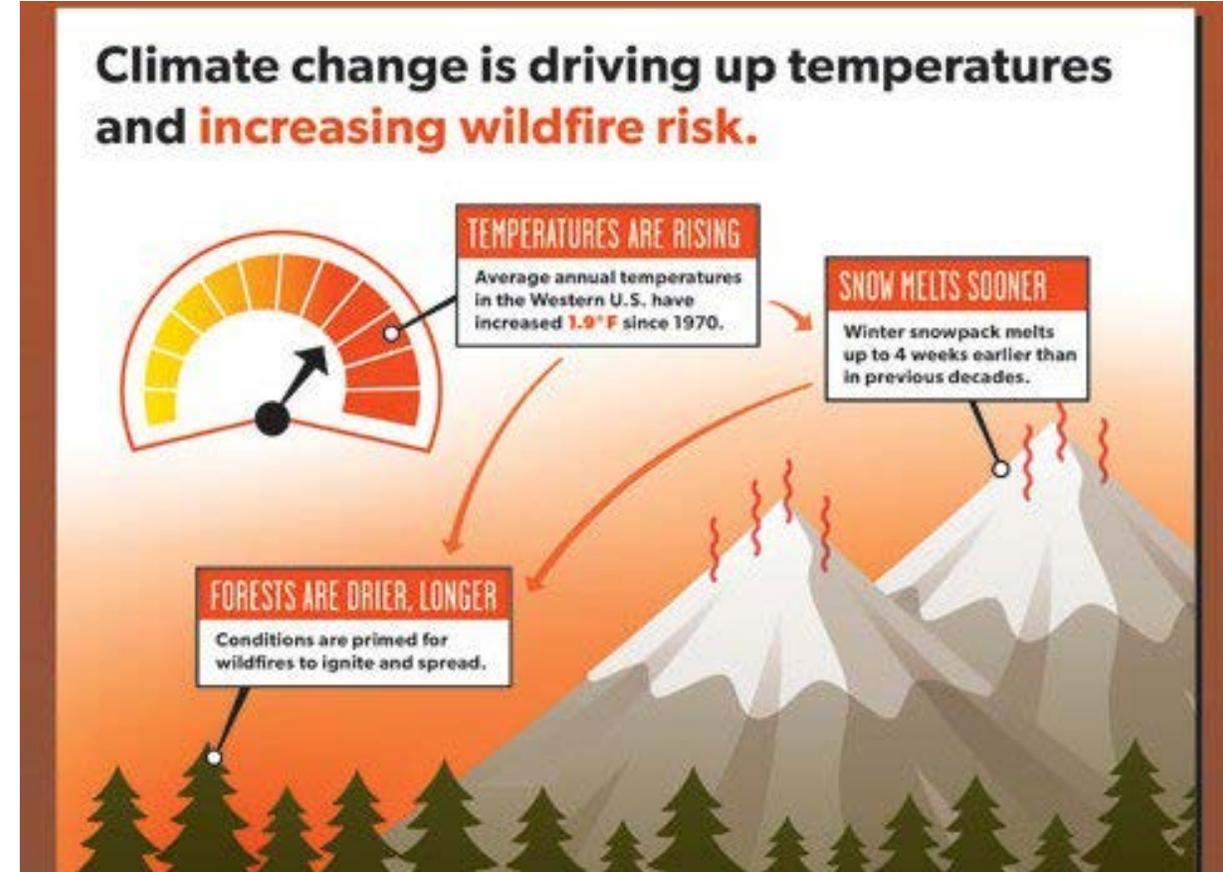
Change and forest fire

Higher spring and summer temperatures and earlier spring snowmelt typically cause **soils to be drier** for longer, increasing the likelihood of drought and a longer wildfire season.

As the climate warms, moisture and **precipitation levels** are changing, with wet areas becoming wetter and dry areas becoming drier.

As the temperature increases in spring and summer and plants use up the water stored in the soil, the amount of water held in plants decreases, making them more **flammable**.

Climate change is causing warmer temperatures, which dry out vegetation more. It is also causing winter precipitation to fall over a shorter period and the length of the fire season is increasing.



Consequence of a forest fire

Loss of Ecosystems and Biodiversity

Wildfires destroy the habitats and the intricate relationships of diverse flora and fauna leading to loss of ecosystems and biodiversity.

Forest Degradation

Forest fires such as the ones that commonly happen in dry tropical forests are a major cause of forest degradation. Whenever forest fires are experienced, thousands of acres of trees and vegetation cover are wiped out.

Air Pollution

When plant life is exterminated by fires, the quality of air we breathe in declines and greenhouse gasses increase in the atmosphere leading to climate change and global warming. In addition, the huge clouds of smoke instigated by wildfires lead to massive air pollution.

Consequence of a forest fire

Soil Degradation

Forest soils also consist of numerous natural features that support a plethora of life forms and organic activities. Wildfires also kill beneficial soil microorganisms that are responsible for breaking down the soil and promoting soil microbial activities. The burning of trees and vegetation cover also leaves the soil bare making it readily vulnerable to soil erosion.

Economic Losses

Wildfires devastate everything in their path including property. On top of that, local authorities spend millions to put out or control the fire.

Loss of valuable timber resources

Ozone layer depletion

Loss of livelihood for tribal people and the rural poor

Consequence of a forest fire

Destruction of Watersheds

Burned organic matter in the soil (volatized organic compounds) also affect the natural layering of the soils. This negatively affects infiltration and percolation, making the soil surfaces water repellent. Water therefore is unable to drain into water tables and the run-offs on the surfaces cause erosion.

Impacts to Human Well-being and Health

Wildfires have contributed to some fatalities, especially impacting firefighters and lifesavers. The effect of smoke and dust also causes intense breathing discomfort and can worsen the health of people with allergies and respiratory disorders.

Benefits of forest fire

Fire is an integral part of Forest ecosystems because it consumes dead vegetation, creates space for new plant growth, and helps limit the density of vegetation.

There is always remarkable growth after a wildfire. Some tree species have their seeds opened and thrown to ash-enriched soils and begin to grow.

Wildfires also promote flowering and fruiting of some plant species. This is because wood ash is one of the best fertilizers around.

Prescribed fires, which are planned fires lit by managers, are conducted to help reduce the build up of vegetation and break up the continuity of these fuels across the landscape.

The most effective tool for managing the risks to society from wildfire is more fire.

Major forest fires 2018



California: August 2018

A series of large wildfires erupted across California, mostly in the northern part of the state, including the destructive Carr Fire and the Mendocino Complex Fire (California's biggest wildfire on record, burnt for the month). A national disaster was declared in Northern California, due to the extensive wildfires burning there.

Number of major active blazes nationwide in US were over 100. It includes

British Columbia : The Comstock Lake, Nanaimo Lakes (Vancouver island),

Montana: Reynolds Lake, northern Washington, The Tugwell Creek fire near Sooke.

Nevada, Oregon, Utah (Trail Mountain Fire, West Valley Fire, Dollar Ridge Fire, Pole Creek Fire) and Washington state.

Fire
Tweedsmuir Complex fire
Johnny Creek Fire
Alkali Lake Complex fire
Lutz Creek Complex fire
Shovel Lake fire
Nadina Lake fire
Verdun Mountain fire
Silver Lake fire
Tommy Lakes
Island Lake fire
Chutanli Lake fire

2018 California wildfires



- 1 Gamer Complex
- 4 Mendocino Complex
- 2 Natchez Fire
- 5 Ferguson Fire
- 3 Carr Fire

An August 1, 2018, satellite image of the wildfires burning in Northern California and Southern Oregon; smoke can be seen trailing northeastward over Nevada, Oregon, Washington, and Idaho



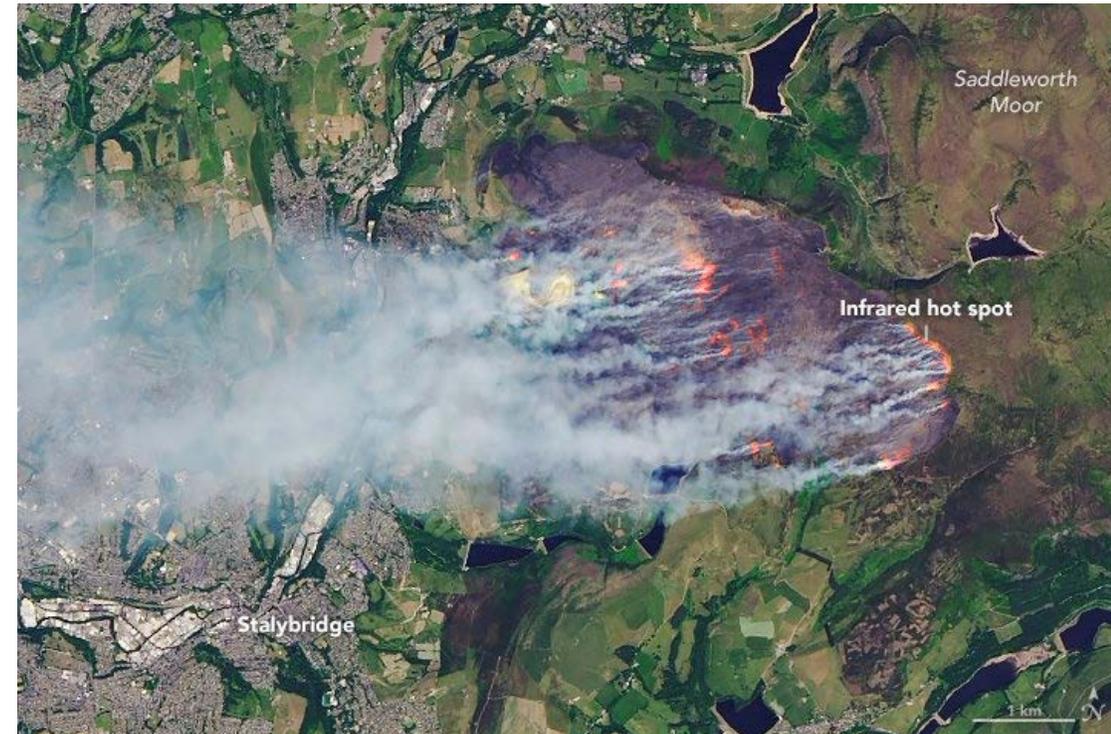
Major forest fires 2018

United Kingdom

The two largest fires, which were declared major incidents on Saddleworth Moor in Greater Manchester and Winter Hill in Lancashire. Other large fires broke out in Glenshane Pass in County Londonderry, Northern Ireland and in the Vale of Rheidol in Ceredigion, Wales. The **Saddleworth Moor** fire has been described as the largest English wildfire in living memory.

Sweden

In the summer of 2018, a large number of wildfires (primarily forest fires) occurred throughout much of Sweden. According to the Swedish Civil Contingencies Agency, they are the most serious in the country in modern history. The summer was unusually warm and dry, significantly raising the risk of fire.



Major forest fires 2018



Russian wildfire

Dry, warm conditions in the spring set the stage for fires in Siberia. By May, more fires per month were seen in Amur Oblast than any year since 2008.

Attica wildfires

A series of wildfires in Greece, during the 2018 European heat wave, began in the coastal areas of Attica. The fires were the second-deadliest wildfire event in the 21st century, after the 2009 Black Saturday bushfires in Australia that killed 180.

Queensland Australia : November 2018

Bushfire hit central Queensland with Fire conditions in the area rated as potentially catastrophic with 140 fires burning around the state. Fires were being fanned by a cocktail of high-winds, record-breaking temperatures and unusually low humidity.



References

<https://www.earthclipse.com/environment/>

<https://www.conserve-energy-future.com/>

<https://www.ucsusa.org/global-warming/science-and-impacts/>

<https://earthobservatory.nasa.gov/images/144312/fires-rage-in-queensland>

https://en.wikipedia.org/wiki/2018_wildfire_season

<https://www.imagenesmy.com/imagenes/forest-fire-vocabulary-dd.html>