

THE WILDFIRE PANDEMIC



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In recent times there has been a dramatic and deadly increase in global wildfire activity which has raised concern over its causes and consequences and how the risks associated with it can be mitigated. In common words wildfire can be defined as an unplanned and uncontrolled fire that has spread over a vast area consisting of combustible vegetation. It mainly depends on the type of vegetation and the weather over the region.

Wildfires have been traceable in Earth's history with fossil evidences supporting its occurrence for over 350 million years. Human beings since their emergence have coexisted with this natural phenomenon, thereby leading to fire playing a crucial role in shaping ecosystems and climate of the planet. The use of fire by humans have also influenced wildfire patterns and with the increased interactions between humans and environment that has culminated, has led to subsequent increase of this inferno. A study has indicated a 10% increase in global area burned during the second half of the past century i.e since the 1980s. Climate change has been identified as one of the primary factors that induce wildfire activity with rising temperatures and drying weather conditions which contribute to greater fuel loads as well as a longer fire season.

The natural causes of wildfire can be attributed to lightning which is the most common ignition source that causes the vast majority of wildfires. Climate change is undoubtedly the biggest trigger of extreme lightning storms. Warm and long summers that heat up the land along with carbon dioxide emissions causes updraft leading to lightning. Fuel is another component that initiates a wildfire. It often consists of dry vegetation, elevated temperatures and low winter precipitation. Humans are also

responsible for initiating wildfires, either accidentally or intentionally. Human-related events include open burning such as campfires, equipment failure, and the malfunction of engines to debris burning, negligent discarding of cigarettes on dry grounds as well as other intentional acts of arson. The latter accounts for one of the most common causes of wildfires.

Our planet has witnessed the worst and largest wildfire in its recorded history - **The Siberian Taiga Fires of 2003** which had burnt approximately 55 million acres across Eastern Siberia. The smoke from this fire had travelled far reaching parts of Europe. These fires were fueled by extreme temperatures and dry conditions exacerbated by the ongoing climate crisis. In **2019-2020 The Australian Bushfire** which is known as the **Black Summer**, around 42 million acres of land were up in flames with a devastating loss of biodiversity and human lives.

The year 2024 has witnessed an alarming number of wildfires that include the mainland of South America where parts of Brazil, Chile, Columbia, Peru and Bolivia has experienced wildfires some of which are still ongoing. This has raised concern among the environmentalists who are staging protests. The **Californian Wildfires** of 2024 in the USA had the most burned acres since the 2021 season. In **February 2025, Japan** experienced its largest wildfire in over 50 years causing severe distress. In **March 2025, South Korea** had its worst wildfire in history since 1987.



(Source: ctif.org)



(Source: nytimes.com)

At global level in the 21st century, wildfire has become a common disaster in regions including the USA, Russia, Bolivia, parts of the Amazon forest and Australia. Typically, the human practices have made its impacts far worse through climate change with presence of intense heat waves and droughts, land use changes and wildfire suppression. The carbon released add to the CO₂ concentrations in the atmosphere contributing to greenhouse effect and thereby creating climate change feedback.

Since the practice of deforestation is considered to be the leading cause of wildfires, the **Deforestation Pledge** was signed among more than 100 countries at the 26th annual United Nations Climate Change Conference (**COP26**) as a promising step.

The countries need to be more accountable and take responsibility for their actions through efforts like funding and implementing stringent forest protection laws. Mitigating these fires is crucial if we want to conserve wildlife and vegetation and avoid undesirable health problems and diseases which are caused by air pollution from smoke and ash.

As the saying goes, never to act without thinking in an emergency situation, the same applies in today's world as the flames of destruction are ablaze, humans should be concerned with this rising inferno and its environmental implications.

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