



Uttarakhand Breaks Rainfall and Heat Records

Why in News?

As per a **report by Climate Trends**, Uttarakhand has been witnessing **extreme weather events** for the past two months, ranging from record breaking temperatures to extremely heavy rainfall triggering [flash floods and landslides](#).

Key Points

- The rise in global average temperatures has **increased atmospheric moisture**, leading to the **formation of intense clouds and triggering heavy rains**.
 - As temperatures continue to rise, these intense rain events are likely to become more common.
- In Uttarakhand, the **warming temperature trend is worsening forest fire** events to a greater extent.
- **Human-caused climate change is influencing weather** and climatic extremes in higher elevation places, and many recent studies have reported on the increasingly prevalent [Elevation-Dependent Warming \(EDW\)](#).
 - EDW influences the [Himalayan rivers and glaciers](#) (changes in the glacial mass balance, river discharge, snowfall), which is the only water source for the hilly region's livelihood.

Flash Floods

- These are **sudden surges in water** levels generally during or following an intense spell of rain.
- These are **highly localised events of short duration** with a very high peak and usually **have less than six hours** between the occurrence of the rainfall and peak flood.
- The flood situation worsens in the presence of **choked drainage lines** or encroachments obstructing the natural flow of water.

Landslide

- A landslide is defined as the **movement of a mass of rock, debris, or earth down a slope**.
- They are a **type of mass wasting**, which denotes any downward movement of soil and rock under the direct influence of gravity.
- The term landslide encompasses **five modes of slope movement: falls, topples, slides, spreads, and flows**.