

Wild Weather

Climate change is wreaking havoc on the weather worldwide.

Hurricanes. Blizzards. Droughts. Floods. These wild-weather events are nothing new. But scientists say they're happening more often. And most think that **climate change** due to human activity is partly to blame.

Warming World

Over the past 150 years, the planet's average temperature has climbed 0.8 degrees Celsius (1.4 degrees Fahrenheit). That's more than it rose in the previous thousand years.

What's causing the warm-up? Earth's temperature has changed naturally throughout history. But many scientists say the recent warming is likely related to the way humans make energy. Across the world, people burn **fossil fuels**, such as oil and coal, to run cars and make electricity. When this happens **greenhouse gases**, such as carbon dioxide, get released into the atmosphere.

"These gases tend to trap heat near the [Earth's] surface. This makes it slightly warmer on average than it would be if greenhouse gases weren't increasing," says Derek Arndt, a climate expert with the National Oceanic and Atmospheric Administration.

Making the Link

How could a warmer climate lead to extreme weather? It starts with the way warmer temperatures increase the evaporation of water.

- **Strong storms:** Many storms begin when warm water evaporates off the ocean's surface and rises into the atmosphere. The warmer the water, the faster it evaporates. That makes for moister, warmer ocean air—an important ingredient for hurricanes.
- **Floods and blizzards:** "A warmer atmosphere can hold more moisture," explains Arndt. "[Put that] into a storm system, and it's going to be able to produce more [precipitation]." These conditions can make floods and blizzards more likely in some places.
- **Droughts:** If warmer temperatures evaporate extra water, but that water doesn't then fall back in the same place as rain or snow, the result can be dryer soil and shrunken lakes and rivers. That kind of drought can affect farmers and wildlife. And drought can make it easier for wildfires to spread.

Scientists expect that climate change will continue to increase wild weather across much of the planet. They will be studying extreme events to better understand what is happening and how to help people stay safer and better prepared.

