

Global warming

Global warming is the long-term heating of Earth's surface observed since the pre-industrial period (between 1850 and 1900) due to human activities, primarily fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere. This term is not interchangeable with the term "climate change."

Since the pre-industrial period, human activities are estimated to have increased Earth's global average temperature by about 1 degree Celsius (1.8 degrees Fahrenheit), a number that is currently increasing by more than 0.2 degrees Celsius (0.36 degrees Fahrenheit) per decade. The current warming trend is unequivocally the result of human activity since the 1950s and is proceeding at an unprecedented rate over millennia.

How is global warming linked to extreme weather?

Scientists agree that the earth's rising temperatures are fueling longer and hotter heat waves, more frequent droughts, heavier rainfall, and more powerful hurricanes. In 2015, for example, scientists concluded that a lengthy drought in California—the state's worst water shortage in 1,200 years—had been intensified by 15 to 20 percent by global warming. They also said the odds of similar droughts happening in the future had roughly doubled over the past century. And in 2016, the National Academies of Science, Engineering, and Medicine announced that we can now confidently attribute some extreme weather events, like heat waves, droughts, and heavy precipitation, directly to climate change.

