

Last year's record temperatures would not have been possible without climate change, a study has found. Scientists say it's the first time they've been able to attribute specific weather events to human activities.

The research, published Wednesday in the Bulletin of the American Meteorological Society, concluded that the 2016 global heat record would not have been possible in a preindustrial climate.

The international team of scientists also found that last year's extreme temperatures in Asia and unusually warm waters off the coast of Alaska were a direct result of human-driven fossil fuel emissions.

"This report marks a fundamental change," BAMS editor-in-chief Jeff Rosenfeld said.

While scientists have long known that climate change may have increased the chances of certain floods, droughts, storms and other extreme events, it hadn't yet been pegged as the sole cause.

"Finding multiple extreme events that weren't even possible without human influence makes clear that we're experiencing new weather, because we've made a new climate," Rosenfeld said.

#### Extreme events

The study presented 27 peer-reviewed analyses of extreme weather across five continents and two oceans in 2016. More than 100 scientists from 18 countries took part in the research.

The earth's mean surface temperature broke records last year, something that was "only possible due to substantial centennial-scale anthropogenic warming," the report said.

Researchers also said the heat wave that swept Asia last year, claiming more than 500 lives in India, was caused by climate change.

Ocean temperatures in the Gulf of Alaska, Bering Sea and off northern Australia were the highest in 35 years of satellite records. The warming waters resulted in "massive bleaching of the Great Barrier Reef and one of the largest harmful algal blooms ever off the Alaska shore," according to the report.

The researchers concluded that it was "extremely unlikely that natural variability alone led to the observed anomalies."

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