

2016: indicators of a changing climate

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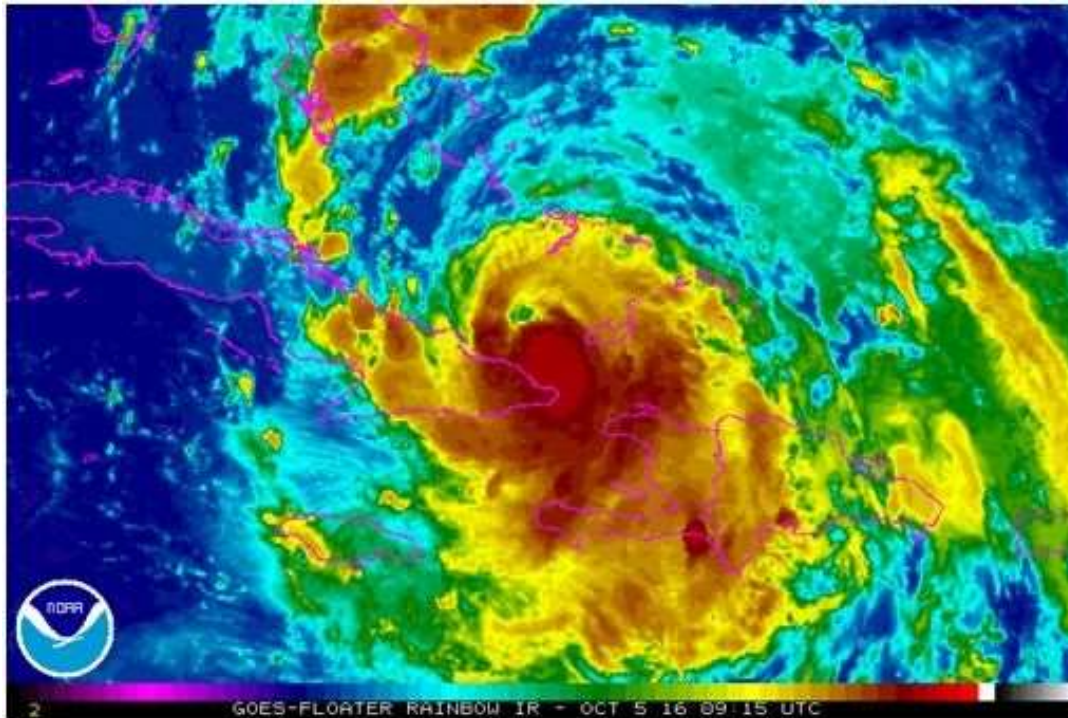
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An international analysis of the global climate for 2016 has been published in the report *State of the Climate in 2016*, released today by the American Meteorological Society.

It has been widely reported that globally 2016 was one of the two warmest years (along with 2015) in a temperature series stretching back to 1850. However, the report – [State of the Climate in 2016](#) – highlights other key indicators of climate change, such as record high sea-surface temperatures and sea-levels in 2016. The report also highlights the fact that severe drought affected over 12 percent of the earth's land surface in 2016, the longest such stretch of drought conditions on record.

[Professor Peter Stott](#) is the acting head of the Met Office Hadley Centre. He said: “When viewed together [2015 and 2016](#) were by far the warmest years in a global series stretching back over 160 years. Global average surface temperatures are an important measure of climate change, but as this report shows there many other indicators adding to the overwhelming evidence of a warming world.

“Atmospheric [carbon dioxide concentrations](#) have reached levels unprecedented in at least 800,000 years. The summer minimum in [Arctic sea ice extent](#) has decreased by over 13 per cent per decade since 1979, and in 2016 glaciers lost ice for the 37th successive year.”



The most notable storm of 2016, in terms of intensity, longevity, damage and fatalities was Hurricane Matthew. Here it is captured passing over the eastern tip of Cuba.

The Met Office's [Dr Robert Dunn](#) has co-edited the global climate chapter of the report. He added: "Added to climate change, the planet also experiences natural variation within the climate. Undoubtedly, the naturally-occurring El Niño of 2015 and 2016 contributed to the record-breaking temperatures, adding a small additional contribution to each of those years. Extreme weather events, such as heat waves, have always been a feature of natural variation. But with a changing climate as our report shows, there has been a clear increase in the number of extremely warm days worldwide. In 2016, extreme heatwaves were seen in the United States, in Europe, the Middle East and in India."