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February 2016 the hottest month on record: climate scientist

The World Today By Simon Lauder

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The latest data for February 2016 shows it was the world's hottest month on record, says a leading climate scientist, and it is not just because of the El Nino.

Global temperatures in 2015 were the hottest in modern times, breaking 2014's record by a large margin.

And now satellite data on atmospheric temperatures has shown 2016 is off to an even hotter start.

Professor of Atmospheric Science at the University of Melbourne, David Karoly, said the El Nino of 1997-98 was stronger than 2016, leading them to believe there are other reasons for the rise in heat.

He said the El Nino effect was a major factor in 1998 when a previous record for the hottest month ever was set.

"So February of 2016 was even hotter globally than any of the months in 1997 and 1998 associated with this previous El Nino," Professor Karoly said.

"And this year's El Nino is weaker than the El Nino of 1997-98 so we know something else is going on.

"It could be natural variability but in practice when we look at the long-term records we know that global warming due to increasing green house gases has been causing long-term warming of about nine tenths of a degree over the last 100 years.

"And when we compare 2016 temperatures to 1998 temperatures 18 years later, we see they're about one to two tenths of a degree warmer and that's exactly what we would expect from global warming.

"So the record temperatures are partly due to El Nino and partly due to long-term global warming."

Professor Karoly, who is also a member of the Federal Government Climate Change Authority, said what they had seen for February 2016 was preliminary analysis of surface air temperature and comprehensive analysis of satellite-based temperature observations, showing February 2016 had set a new record for the hottest ever February and the hottest ever month in long-term observation.

"For the satellite data, the data is only available from 1980, but for the surface data, the data is available from around 1900 or earlier," he said.

"And February set a new record for the global average temperature, but it also set an even larger and more pronounced record for the average temperature across the northern hemisphere."

Professor Karoly said that follows on from a hot January in both the tropics and in the northern hemisphere.

"In January it didn't set a record for the hottest January - it depends which data set you look at - but for February the record temperature for the northern hemisphere as a whole was such a pronounced record, such a large departure it broke records for the hottest February and the hottest single month at any time in the year," Professor Karoly said.

Professor Karoly said the Earth had been hotter in the past, if scientists were to go back millions of years.

However, he said since scientists have had long-term observational records covering most of the Earth's surface; "The Earth in the instrumental records has not been hotter than it was in February 2016."

Professor Karoly said climate change was also playing a part, but the warming of the tropical Pacific Ocean was a huge factor as well.



PHOTO: Global temperatures in 2015 were the hottest in modern times, breaking 2014's record by a large margin. (ABC News: Andrea Mayes)

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- Global temperatures in 2015 were the hottest in modern times
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2016's El Nino weaker than past ones, signalling it is not the only reason for rise in temperature



AUDIO: 2016 off to hot start after record-breaking year. (The World Today)

The Earth in the instrumental records has not been hotter than it was in February 2016. Professor David Karoly, University of Melbourne

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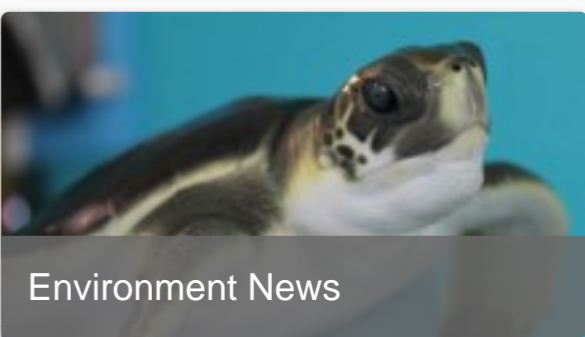
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