

2013 New Zealand's warmest winter on record

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The world continued to warm last year, according to the State of the Climate in 2013 report, with some Southern Hemisphere countries, including New Zealand, having one of their warmest years on record.

New Zealand observed its warmest winter on record and its third warmest year overall while Argentina had its second warmest and Australia its warmest since record keeping began in 1910 according to the indicators assessed in the State of the Climate report, released by the

American Meteorological Society.

The findings have been presented by four scientists who contributed to the report, including Dr James Renwick, an associate professor in the School of Geography, Environment and Earth Sciences at Victoria University of Wellington.

Dr Renwick had overall responsibility for the [climate](#) summaries in the report covering Europe, Asia and Oceania.

Of particular note, he says were the devastating floods in Europe in the spring of 2013 which resulted in 24 deaths and caused billions of dollars of damage.

Asia also experienced [extreme weather events](#) including super-typhoon Haiyan, one of the strongest cyclones ever recorded. At its peak, Haiyan resulted in sustained winds of 315 kilometres/hour and a storm surge of 6 to 9 metres. More than 6,000 people died as a result of the cyclone and two million were left homeless.

Another significant phenomenon noted in the report, says Dr Renwick, was the extreme heat in Australia where some locations recorded temperatures of at least 10 degrees Celsius above average for several days in January 2013.

He describes the findings as sobering but says they are consistent with what scientists know to expect from the changing climate.

"Climate change does not mean a few extra nice days in summer—we are talking about a significant alteration in the climate.

"The sort of temperatures we are calling warmer than average now, will be considered colder than average in 50 or 60 years—that's how quickly

the climate is changing" he says.

Dr Renwick says recent weather events in Northland show the kind of thing New Zealanders can expect in the future.

"The region has had a number of very dry summers in recent years and has now experienced much higher than normal rainfall. Going from drought conditions to very heavy rain and flooding is exactly the kind of pattern we can expect from [climate change](#)."

Dr Renwick says the report findings emphasise that the past is no longer a reliable guide to the future.

"The average climate, and variability of the climate, are both changing and that will alter agricultural patterns in New Zealand and around the world. Just because something has been grown successfully in an area for the past 100 years, there is no guarantee it can continue to be successfully grown there. A farmer is going to see significant change in what can be done on their land over his or her working life."

The State of the Climate report is compiled by 425 scientists from 57 countries and provides a detailed update on global climate indicators, notable [weather events](#) and other data collected by environmental monitoring stations and instruments on air, land, sea and ice.

The lead editors of the report are scientists from the National Oceanic and Atmospheric Administration (NOAA) in the United States. NOAA administrator Dr Kathryn Sullivan says: "These findings reinforce what scientists for decades have observed: that our planet is becoming a warmer place, and taking informed actions to protect people and property cannot be emphasised enough.

"This report is exactly the kind of environmental intelligence

communities businesses and nations need to prepare for and build resilience to the impacts of climate change."

In addition to warming temperature trends, among other highlights of the [report](#) are:

- A continued climb in concentrations of greenhouse gases with levels once again reaching historic high values
- A globally averaged sea surface temperature for 2013 that was among the 10 warmest on record
- A continued rise in sea level
- A continued warming of the Arctic

More information: The 2013 report is available online: http://www2.ametsoc.org/ams/index.cfm/publications/bulletin-of-the-american-meteorological-society-bams/bams-state-of-the-climate-2013/?utm_source=pr&utm_medium=pcon&&utm_campaign=stateofclimate2013

Provided by Victoria University

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