



Extreme heat, freak rainfall breaks summer records

[James Fernyhough](#)

Reporter

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Days of extreme heat and rainfall skyrocketed last summer by several times the 30-year average, delivering the hottest summer on record in another clear signal of the risks posed by climate change, a report by the Actuaries Institutes has found.

The latest Australian Actuaries Climate Index found the number of days of extreme heat over the 2018-19 summer was three times the 30-year average between 1980 to 2000.

Meanwhile, the days of extreme rainfall in the wet tropics was up a massive 430 per cent, or more than five times the 30-year average. In southern Queensland and NSW the index recorded an increase in extremely dry days.

The release of the report followed revelations that greenhouse gas emissions – which are responsible for global warming and the corresponding increase in extreme weather – rose in Australia last year for a fourth consecutive year.

The Climate Index, which [was launched last year](#), is intended to help insurers, businesses and governments assess their exposure to extreme weather events. It records the number of days when temperature, rainfall and wind surpass the top 1 per cent recorded for that day historically.

“The most recent summer has been the hottest on record, both in terms of average temperatures as reported by the Bureau of Meteorology and in terms of the frequency of extreme temperatures as measured by the Australian Actuaries Climate Index,” said actuary Tim Andrews, who led the development of the index.

“The Bureau of Meteorology predicted this summer’s hot weather and reported it would be driven by a combination of the long-term increasing trend in global air and ocean temperatures, and the El Niño weather conditions,” he said.

The rise in extreme rainfall in the tropics but drier conditions in the south is broadly consistent with [CSIRO and Bureau of Meteorology predictions](#) that climate change will lead to more extreme rainfall events, but also a higher likelihood of drought in southern Australia.

The report found the Queensland flooding in February – which [the Insurance Council of Australia last month said had cost the insurance industry \\$1.132 billion in claims](#) – was a “much rarer than a 1-in-100 year event”.

<https://www.afr.com/business/banking-and-finance/extreme-heat-freak-rainfall-breaks-summer-records-20190529-p51sbh>

"In Townsville 1260mm of rainfall was recorded, smashing previous records, as a slow-moving low-pressure system dumped rain for an extended period in late January and early February," the report said.

"The attribution of individual events to climate change is challenging to assess due to high levels of natural variability, but the Townsville event is consistent with expectations for rainfall intensity to increase," Mr Andrews said.

The report came as Australian government figures, published by the United Nations, revealed the nation's total greenhouse gas emissions had increased in 2018 for the fourth year in a row.

In a submission to the UN, the government estimated total emissions last year at 537.4 megatonnes of carbon dioxide and equivalent greenhouse gases. That was up from 534.7 megatonnes in 2017, and 530.4 megatonnes in 2016.

The report found emissions from electricity generation were down, but this was not enough to offset a rise in emissions from other sectors, particularly stationary energy, transport and fugitive emissions (emissions from leaks or other unintended releases of gas).

It also came as the re-elected Morrison government doubled down on its emissions reduction policy of direct action rather than caps on emissions, and using Kyoto credits to meet its target under the Paris agreement.

The Coalition government has opted for the lower target of reducing emissions by 26 to 28 per cent of 2005 levels by 2030. Labor had promised to reduce emissions by 45 per cent over the same period, a level that would still not be enough to keep temperature rises at or below 1.5 degrees.

Global temperatures have increased about 1 per cent on pre-industrial levels, and on the current trajectory are set to rise 4 per cent by the end of the century. Temperature rises of that magnitude would have potentially devastating meteorological, ecological and economic effects, [and could render the world uninsurable, according to Australian insurance giant IAG](#).

Following the Coalition's unexpected victory in the May 18 election, the Insurance Council, which represents general insurers, [lost no time in calling on the re-elected government to put a "greater focus" on natural disaster mitigation](#) and climate action.

[James Fernyhough](#) writes about telecommunications, insurance and financial services. He's based in the AFR's Melbourne office. Connect with James on [Twitter](#). Email James at james.fernyhough@afr.com.au