

Climate change and wildfires – how do we know if there is a link?

Click on link above to find out

By Kevin Trenberth, National Center for Atmospheric Research

With California suffering another devastating wildfire year, more people are wondering about whether and how global warming is contributing. A climate scientist explains.

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New Zealand weather and climate news

Courtesy of MetService Library

MetService

Your weather: Rain, thunderstorms, possibly small tornadoes coming tonight in Auckland, Northland

This morning the front was bringing heavy rain to Fiordland and Westland, MetService meteorologist **Michael Martens** said.

https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12105905

Stormy conditions on way for northern North Island and West Coast

A comparatively mild winter in many areas was partly due to a lack of polar outbreaks - prolonged direct southerlies which can deliver cold air from the Antarctic, MetService meteorologist April Clark said.

<https://www.stuff.co.nz/national/106210288/stormy-conditions-on-way-for-northern-north-island-and-west-coast>

National Research Charter for Aotearoa being developed

A new charter to set out the principles underpinning sound research practice in New Zealand is being developed.

A working group has been formed, with support from research funding agencies, bodies representing different types of research organisations and Royal Society Te Apārangi.

<http://www.scoop.co.nz/stories/SC1808/S00007/national-research-charter-for-aotearoa-being-developed.htm>

Heavy rain and gales forecast to hit parts of New Zealand

MetService meteorologist **Georgina Griffiths** said there was a risk of widespread damaging gales for Auckland, but possibly not as bad as those on 10 April.

<https://www.radionz.co.nz/news/national/364006/heavy-rain-and-gales-forecast-to-hit-parts-of-new-zealand>

Vector crews on standby as Auckland region braces for thunderstorms, king tides and possible tornadoes

The Auckland region and parts of the Coromandel Peninsula will be hit with the brunt of the wild weather, says MetService meteorologist **Ravi Kandula**.

https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12106265

Climate change: risk of 'tropical' distant future for NZ

New Zealand's climate could revert to a hot, tropical state if the world's emissions aren't reined in, scientists have warned.

https://www.nzherald.co.nz/climate-change/news/article.cfm?c_id=26&objectid=12106226&ref=rss

Whanganui people told climate change could be catastrophic

There's no time to lose if we want to avert catastrophic climate change, Dr James Renwick says.

He's one of New Zealand's leading climate researchers and a lead author of International Panel on Climate Change (IPCC) reports.

https://www.nzherald.co.nz/climate-change/news/article.cfm?c_id=26&objectid=12105649&ref=rss

Video of funnel cloud swirling over Waimea Plains

A cloud formation that looked like a tornado was spotted in Nelson, much to the delight of onlookers.

Marley McLeay captured the phenomenon on video and said: "I've seen many funnels over the plains these past years and certainly this was one of the most photogenic formations I've seen."

<https://www.stuff.co.nz/nelson-mail/news/106262501/strange-phenomenon-swirls-over-waimea-plains>

Extreme weather (and other news) – Australia and Pacific

BOM: Is it cold enough for a jacket? Here's why you should check the 'feels like' temperature

You've checked the temp on your phone and it reads 13.5 degrees Celsius, but the "feels like" temperature says it's 6.7 degrees.

So, should you bring a jacket or not?

<http://www.abc.net.au/news/2018-08-10/weather-feels-like-temperatures/10050622>

Clouds leaving strange holes in the sky over Brisbane likely the work of planes, not aliens

It was not an alien invasion portal, but strange shapes were appearing in the skies over large parts of Queensland on Tuesday.

<http://www.abc.net.au/news/2018-08-07/clouds-punch-holes-in-brisbane-sky-but-no-alien-invasion/10083458>

Chart of the day: is this the most severe drought in history?

Australia is no stranger to droughts, so how does the current big dry across southern Australia compare historically?

The chart below shows autumn rainfall compared to the long-term average, going back to 1900.

<http://www.abc.net.au/news/2018-08-06/how-does-the-current-drought-compare/10055414>

Dust storms stretching 250 kilometres hit SA's Eyre Peninsula after driest July in 19 years

Dust storms have descended on South Australia's Eyre Peninsula, causing skies to darken, with one farmer describing the wild weather as a "disaster" for his crops.

<http://www.abc.net.au/news/2018-08-02/sa-dust-storm-threat-triggers-warnings-to-people-with-asthma/10065082>

Australia facing extremely intense rain storms

Large increase in sudden downpours in the last 50 years, with the amount of water falling in hourly rain storms (for example thunderstorms) increasing at a rate 2 to 3 times higher than expected.

<https://www.sciencedaily.com/releases/2018/07/180730120245.htm>

Melbourne and Adelaide have been Australia's most vulnerable major cities to killer heatwaves

Melbourne and Adelaide have been most prone to deadly heatwave conditions among Australia's five largest cities, according to my new research published in Climatic Change.

[Read more here](#)

Droughts and flooding rains: How Australia's weather impacts our tradies

For those who work in construction, you may think that managing the weather is simple; just down tools when it is too hot or too wet. However, when there is a pay cheque on the line it is not as clear cut as this.

<http://www.abc.net.au/news/2018-08-16/how-to-mange-weather-in-construction-jobs/10083870>

Extreme weather (and other news) – Americas and Europe

Adapt or perish: UK leads the way in protecting citizens against climate change

Despite the distraction and political chaos of Brexit negotiations, the United Kingdom has just published a far-reaching and thoroughly impressive plan to manage risks from climate change.

This follows on from their broader 25-year Environment Plan, released in January. It aims to "help the natural world regain and retain good health", to enable it to better cope with climate change.

<http://www.abc.net.au/news/2018-08-01/climate-change-adaptation-where-is-australias-plan/10051392>

International news and research

Southern Annular Mode: The climate 'influencer' you may not have heard of

In the world of climate drivers El Nino is the big name. The Bureau of Meteorology has a whole section on its website dedicated to monitoring it, and updates are hotly anticipated.

<http://www.abc.net.au/news/2018-08-14/southern-annular-mode-and-how-it-affects-our-weather/10106134>

Earth to be unusually warm until 2022, model predicts

Temperatures across the globe are likely to be unusually warm over coming years, with greater chance of extremes, scientists have predicted.

https://www.nzherald.co.nz/environment/news/article.cfm?c_id=39&objectid=12106930&ref=rss

Weather Service schools Cayman interns

The Cayman Islands National Weather Service is taking knowledge and paying it forward.

Madison Szeryk, Benjamin Harding and Kieran Williams interned with the Weather Service this year, and a number of public and private schools across the island have made class visits to learn about the field of meteorology.

<https://www.caymancompass.com/2018/08/13/weather-service-schools-cayman-interns/>

WMO

Cloud formation and distribution follows simple thermodynamic, statistical laws

The result: An easier way to model cloud cover

https://www.eurekalert.org/pub_releases/2018-07/uou-cfa072318.php

Does rain follow the plow?

There are many factors that play a role in whether or not it rains, and new research shows that human activity may be one of them.

<https://www.sciencedaily.com/releases/2018/08/180810091556.htm>

Meteorologists laud tech for notifications

As a tornado ripped through Woodstock, Conn., and another barreled through Webster and Dudley on Saturday morning, Glenn Field headed there to get an up-close look at the damage left behind

http://www.bostonherald.com/news/columnists/jessica_heslam/2018/08/meteorologists_laud_tech_for_notifications

The Never-Ending Summer Is Germany's Heat Wave a Preview of the Future?

Germany is currently experiencing a state of meteorological emergency. Although many are enjoying the scorching summer, the heat wave has left others with health

problems and also led to a drought. Is this a preview of how climate change may soon change our lives? *By DER SPIEGEL Staff*

<http://www.spiegel.de/international/germany/the-never-ending-summer-is-germany-s-heat-wave-a-preview-of-the-future-a-1221557.html#ref=rss>

What the Clouds? How Cloud Observations Are Made.

Cloud Observations

Look up in the sky and it should be fairly obvious if there are clouds above you. If one looks from horizon to horizon and sees nothing but blue sky (cyan actually), few people would disagree with the statement that it is *clear* outside. Similarly, if no blue is visible when looking up, a consensus of *cloudy* is easy to obtain. Cloud coverage between 0% and 100% is a different matter altogether.

<https://www.forbes.com/sites/brianbrettschneider/2018/07/26/what-the-clouds/#3af44e7b2977>

Climate change is making extreme weather more regular, Met Office expert warns

Heatwaves and cold snaps are likely to become more extreme and more regular because of climate change, an expert has warned.

<https://metro.co.uk/2018/07/27/extreme-weather-will-become-regular-climate-change-expert-warns-7767503/>

Northern Wisconsin Study Could Provide More Accurate Weather Forecasting

MADISON, Wis. – Researchers next summer will take to the plains of northern Wisconsin for a study that suits what the state is known for.

The study, dubbed with the acronym "CHEESHEAD19," will examine how plant growth and decline throughout the seasons affects the atmospheric climate in local areas. One of the biggest potential benefits is the improvement of weather forecasting.

<https://www.publicnewsservice.org/2018-08-01/climate-change-air-quality/northern-wisconsin-study-could-provide-more-accurate-weather-forecasting/a63529-1>

Long term weather forecasts predicted European dry heat over six weeks in advance

As the present heat and the lack of rain impact huge parts of the European economy, many organizations all over Northern Europe are asking themselves, 'Could we have been better prepared?' Long term ('Seasonal') forecasts are the solution. They have been predicting this summer's dry spell several weeks in advance.

<https://www.meteogroup.com/long-term-weather-forecasts-predicted-european-dry-heat-over-six-weeks-advance>

Trump's pick for science adviser is making climate change scientists happy

President Donald Trump has nominated meteorologist Kelvin Droegemeier, a highly respected extreme weather expert from Oklahoma, as his science adviser.

<https://www.theblaze.com/news/2018/08/02/trumps-pick-for-science-adviser-is-making-climate-change-scientists-happy>

FormoSat-7 satellite group to improve typhoon prediction: CWB

Taipei, Aug. 3 (CNA) The FormoSat-7 satellite group, a U.S.-Taiwan collaboration that could be launched by the end of this year, will greatly improve the world's typhoon prediction capabilities, the deputy head of the Central Weather Bureau said Friday.

<http://focustaiwan.tw/news/asoc/201808030023.aspx>

Discover the innovative Lufft WS10 Compact Weather Sensor

The WS10 is an affordable all-in-one weather sensor covering 10 parameters simultaneously. It's suitable for building automation, smart home, smart city and solar rooftop applications.

<https://www.lufft.com/get-to-know-the-smart-and-affordable-multi-parameter-weather-sensor-lufft-ws10/>

Vaisala Supports Chief Science Officer's Run for American Meteorological Society President

Dr. Kevin Petty brings over 20 years in atmospheric science experience to public, private and academic sectors.

Vaisala, a global leader in products and solutions for environmental and industrial weather measurement, supports Chief Science Officer Dr. Kevin Petty in his nomination for president-elect of the American Meteorological Society (AMS) this year.

<https://globenewswire.com/news-release/2018/08/07/1548106/0/en/Vaisala-Supports-Chief-Science-Officer-s-Run-for-American-Meteorological-Society-President.html>

Protest of the Bulgarian Meteorologists from NIMH

Protest of the Meteorologists of the Bulgarian Academy of Sciences. By letter to Prime Minister Boyko Borisov, meteorologists insist that the National Institute of Meteorology and Hydrology be moved away from the BAS and passed under the Ministry of Education's hat as an independent scientific organization. They also state that they have stopped implementing any dispositions and decisions of the Bulgarian Academy of Sciences.

<https://www.novinite.com/articles/191542/Protest+of+the+Bulgarian+Meteorologists+from+NIMH>

Radar better than weather balloon for measuring boundary layer

Improving forecasting for a host of severe weather events may be possible thanks to a more comprehensive method for measuring the Earth's boundary layer depth.

<https://www.sciencedaily.com/releases/2018/08/180802141816.htm>

Business development / commodities / infrastructure etc

Planalytics: Weather shouldn't be an excuse, but it can be a reason...

Evan Gold of Planalytics discusses the impact severe weather throughout the U.S. is having on businesses and consumer behavior.

<https://www.cnbc.com/video/2018/07/25/planalytics-weather-shouldnt-be-an-excuse-but-it-can-be-a-reason-for-poor-business-performance.html>

Warm weather boosts UK's economic growth as retail sales increase

BRITAIN'S recent heatwave has boosted economic growth, according to experts, with both retail sales and construction experiencing a lift over the last few months.

<http://www.heraldscotland.com/news/16412377.warm-weather-boosts-uks-economic-growth-as-retail-sales-increase/>

The AA 'on track' despite extreme weather

The AA's roadside business has been strongly hit by the bad weather, with the number of breakdowns in the period seeing a significant rise to 1.91 million – much higher than the average over the last 10 years. The firm said the 8% climb in total breakdowns resulted in increased costs of third-party garaging to supplement the AA's own patrol availability.

<https://www.insurancebusinessmag.com/uk/news/auto-motor/the-aa-on-track-despite-extreme-weather-108436.aspx>

Satellites and radar

New International Contracts For Leonardo's Weather Radars In 2018

Leonardo's Meteor family of weather radars have been chosen by customers in Europe, Africa, the Americas and the Asia Pacific over the last six months

The state-of-the-art radars will be used for a variety of purposes including weather forecasting, air traffic control and environmental monitoring

Leonardo's Industrial Plan sees product leadership as one of the ways in which the business will maintain long-term sustainable growth

<https://www.rfglobalnet.com/doc/new-international-contracts-for-leonardo-s-weather-radars-in-0001>

Transport/roading/shipping/freight

Bosch Announces Predictive Road-Condition Services for Automated Vehicles

First with weather data then vehicle data, Bosch aims to make driving safer.

<http://www.thedrive.com/news/22381/bosch-announces-predictive-road-condition-services-for-automated-vehicles>

Weather accounts for 80% of vessel performance and must not be ignored

Shipowners, operators and managers should consider optimising ship voyages as the most effective way to improve vessel performance. This is because weather and ocean conditions account for 80% of impact on vessel performance, according to voyage intelligence specialist StratumFive's chief executive Stuart Nicholls.

http://www.marinemec.com/news/view,weather-accounts-for-80-of-vessel-performance-and-must-not-be-ignored_53859.htm

Climate change / global warming / sea level rise

Health risks of "Hothouse Earth" a disaster - report

A report released this week on the dangers of heading towards "Hothouse Earth" makes it clear that climate change is now a public health emergency.

"Just as we would react to the threat of pandemic, we need to speed up our efforts to tackle emissions and protect health," says Dr Rhys Jones, Co-convenor of OraTaio: The NZ Climate and Health Council.

<http://www.voxy.co.nz/health/5/317966>

Study sees dramatic rise in heatwave deaths by 2080

LONDON (Reuters) - The number of people dying from heatwaves is likely to rise sharply in some regions by 2080 if policymakers fail to take mitigating steps in climate and health policies, according to the results of a study on Tuesday.

[Read more here](#)

Climate change: Extreme fire risk may double

A warming New Zealand could help its pine forests grow - but not without extreme fire risk almost doubling by the end of the century.

https://www.nzherald.co.nz/climate-change/news/article.cfm?c_id=26&objectid=12105654&ref=rss

MetService and TOA Systems collaborate on world-first

MetService New Zealand is pioneering the first-ever South Pacific-wide lightning detection network in partnership with TOA Systems, Inc, a leading global provider of lightning detection solutions. In South Pacific countries, lightning information from the SPLN will assist with forecasting and monitoring of events by National Meteorological Services. Disaster response agencies in these countries will also have an increased ability to mitigate the impacts of lightning through awareness and education.

[Read more here](#)

Business development / commodities / infrastructure etc

Public insurance and climate change (part one): Past trends in weather-related insurance in New Zealand

30 Jul 2018

[David A. Fleming](#), [Ilan Noy](#), [Jacob Pástor-Paz](#), [Sally Owen](#)

[Motu Economic and Public Policy Research](#)

Climate change appears to be increasing the frequency and magnitude of extreme weather events, negatively affecting communities as well as posing long-term sustainability challenges to insurance (risk transfer) mechanisms.

New Zealand's public natural hazard insurer, the Earthquake Commission (EQC), covers homeowners for damage to land (and in some cases to dwellings and contents) caused by landslip, storm or flood. We comprehensively explore the EQC claims data to investigate these weather-related claims from 2000-2017.

We find no clear upward trend yet emerging in the number of claims or their value. We find that the northern regions of both islands are the source of most claims, that

only a handful of weather events caused a large proportion of EQC's weather-related pay-outs, that the average property lodging a weather-related claim is located twice as close to the coast as the national average, and that properties with claims usually are cited on much steeper land than the typical property in New Zealand.

We also explore their relation between claims and socio-economic characteristics, finding that higher income neighbourhoods appear to be those most benefiting from the EQC coverage for weather events.

Aviation

NTSB recommends formal training on low-level turbulence forecasting

The U.S. National Transportation Safety Board (NTSB) is urging the U.S. National Weather Service (NWS) to develop and provide aviation weather forecasters with formal training on forecasting low-level turbulence.

<https://transportationtodaynews.com/news/10300-ntsb-recommends-formal-training-on-low-level-turbulence-forecasting/>

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Welcome to AMS News You Can Use. Each week, we send out a sampling of recent news and items of interest in meteorology and related fields, as covered by various media outlets. Searchable archives are [available online](#).

Why The U.S. Space Program Never Left

Forbes - 08/14/2018

Science Mission Directorate. When I told people that I was a research meteorologist at NASA the following questions would usually come next.

Measuring the Continued Destruction of Coral in the Great Barrier Reef

Pacific Standard - 08/13/2018

that cooled waters during the first bleaching event. Storms, meanwhile, are increasingly intense and causing more damage to coral reefs.

The Hidden Danger Of Wildfires - Flash Floods On Burn Scars

Forbes - 08/13/2018

is reestablished. A 2008 study published in the American Meteorological Society's journal Monthly Weather Review examined the meteorological

Historic space weather could clarify what's next

ScienceDaily - 08/13/2018

weather events can be difficult to forecast. This exciting research shows that space weather and the activity of the sun are not entirely

Wildfire temperatures key to better understanding air quality

Phys.org - 08/13/2018

key inputs to fire weather models to improve fire weather forecasts. While manned research and firefighting aircraft don't usually fly near

PHOTOS: California wildfires seen from space

WHNT.com - 08/13/2018

on an almost daily basis," research meteorologist at the University of Wisconsin-Madison research meteorologist Scott Bachmeier explained to

What a difference one degree makes: Iowa is getting hotter, bringing more frequent and intense storms

Des Moines Register - 08/12/2018

The state has gotten warmer over the past 30 years, and scientists expect the years ahead will get even hotter, a shift that's likely to hit cities with more frequent and intense rainstorms

Stronger hurricanes becoming the norm — and that's stumping researchers, meteorologists and computers

The Post and Courier - 08/12/2018

of the storms. "Hurricane track forecasts have improved steadily over the past few decades, yet forecasting hurricane intensity remains

Europe's Nuclear Reactors Fall Victim to the Heat

MFA News Network - 08/11/2018

there is further evidence contained in the annual "Bulletin of the American Meteorological Society," which is for actually for last year but

An army of deer ticks carrying Lyme disease is advancing. It will only get worse.

Grist - 08/11/2018

scope. Employees had to abandon planned climate research related to the health impacts of extreme weather and worsening pollen, records show

This NASA spacecraft will go where none has gone before: Very, very close to the sun

Anchorage Daily News - 08/10/2018

The Obama administration's executive order 13744 created a national space weather policy in 2016. FEMA recently finished drafting a federal

Analysis | Trump's proposed Space Force could worsen Earth's orbital debris problem

The Washington Post - 08/10/2018

single 2007 test when the Chinese military blasted apart one of its own weather satellites with a missile at an altitude of 537 miles. "What

NASA finds Amazon drought leaves long legacy of damage

Phys.org - 08/10/2018

do that, he and his colleagues turned to satellite data. Drought from Space The research team used high-resolution lidar maps derived from

2017 Atlantic Hurricane Season Fast Facts

KRTV.com - 08/9/2018

or higher is considered a major hurricane. The National Hurricane Center advises preparedness: A hurricane watch indicates the possibility

Quieter hurricane season projected in latest forecast

Sarasota Herald-Tribune - 08/9/2018

season is not dead,” said Stanley Goldenberg, a meteorologist with the Hurricane Research Division of the National Oceanic and Atmospheric

Honey Bees’ behavior before a storm: Are they riding an outflow boundary?

WHNT.com - 08/9/2018

Jonathan describes being hit as the bees fly around in the wind. Formal meteorological research on bees' behavior before -- and during -- a

The U.S. Desperately Needs a Better Way to Predict Storms. One Scientist Might Have the Solution - news - att.net

ATT.com - 08/9/2018

the superstorm’s path in 2012 shook up the weather community. When Congress approved additional budget in the aftermath, it included some \$

When Climate Change Starts Wars

Nautilus - 08/8/2018

climate change. A 2014 study in the Journal of Climate, published by the American Meteorological Society, reported that the warming rate in

Army Scientists Create New Technique for Modeling Turbulence in the Atmosphere - Science and Technology Research News

Science and Technology Research News - 08/8/2018

and methodology of ABLE-LBM were presented at the American Meteorological Society Mountain Meteorology Conference June 29 in Santa Fe, New

NOAA Creates Workarounds for Malfunctioning Weather Satellite

Nextgov - 08/8/2018

sure why the cooling system on one of the government's newest weather satellites isn't working, but engineers have been able to increase the

Red Tide Is Devastating Florida's Sea Life. Are Humans to Blame?

MSN.com - 08/8/2018

to follow massive storms, Bartleson says. Both 2004 and 2005 were intense hurricane years in Florida, with multiple storms crisscrossing the

First All-Female Hurricane Hunter Flight Crew Makes History

The Weather - 08/8/2018

wind speed data at different elevations within a hurricane. The data is then used in forecasting and tracking models that can save lives

Don Paul: Meteorological struggles, 'wishcasting' and you

The Buffalo News - 08/7/2018

well ahead of the American GFS model. Some now expect nine-day hurricane forecasts as a matter of routine, but we are nowhere near that

The United States of nice days: Here's where to find the nation's most frequent ideal weather

The Washington Post - 08/7/2018

in climatology. He conducts climate research for the University of Alaska Fairbanks.

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My latest WeatherEye From John Maunder

<https://www.sunlive.co.nz/blogs/12410-tauranga-average-july-afternoon-temperatures-19132018.html>

<https://www.sunlive.co.nz/blogs/12376-tauranga-july-rainfalls-18982018.html>

<https://www.sunlive.co.nz/blogs/12356-yearly-temperatures-england-17002018.html>

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