

## **New Zealand weather and climate news**

*These clips are courtesy of MetService Library*

### ***MetService focus***

#### **Thunder and hail forecast for North Island as wild weather disrupts ferries, flights**

MetService meteorologist Andrew James said this meant streams or rivers could rise rapidly, surface flooding and slips were possible and driving could be hazardous.

<https://www.stuff.co.nz/national/108887796/rain-warnings-issued-around-the-country>

#### **Weather forecasters challenged by recent bad weather**

MetService meteorologist Lisa Murray said the current situation – in which a large area of low pressure spawns lots of mini-lows moving in different directions and simultaneously developing and decaying – was among the most difficult to forecast.

<https://www.stuff.co.nz/science/108882218/weather-forecasters-challenged-by-recent-bad-weather>

#### **Floods underscore importance of radar**

A report to the council this week says the lack of radar coverage during last week's flood made it "difficult to confirm whether some rivers had peaked, especially the Silver Stream, Lindsay Creek and Water of Leith".

Council engineering, hazards and science director Gavin Palmer said the importance of a radar had been conveyed to MetService over time.

MetService communications meteorologist Lisa Murray said it was "unfortunate" the installation of the radar was delayed.

She could not name the preferred site because of ongoing negotiations except that it was about "40km southwest of Dunedin".

<https://www.odt.co.nz/news/dunedin/floods-underscore-importance-radar>

#### **Fine start for North Island and wet start for South Island**

"A pretty decent day for Auckland and Northland. There will be some cloud around and some showers but they will be pretty few and far between," MetService meteorologist Angus Hines said.

[https://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=12168054](https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12168054)

### **Te Anau hit by deluge**

Metservice forecaster Amy Rossiter said there had been a few lightening strikes in the area and localised rainfall, caused by afternoon heating and unstable conditions on Wednesday afternoon.

<https://www.stuff.co.nz/southland-times/news/108947716/Te-Anau-hit-by-deluge>

### **Thunderstorm warning for Hawke's Bay**

Metservice has issued a severe weather watch for Hawke's Bay, with thunderstorms predicted for much of the central and northern North Island.

[https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c\\_id=1503462&objectid=12167071](https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&objectid=12167071)

### **Hail and rain expected as wet weather continues tirade across New Zealand**

MetService said a trough with an associated band of heavy showers was forecast to slowly move southwards over the north of the country this morning.

[https://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=12166679](https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12166679)

### **Shopping centre roof collapses in downpour and 'waterfall' triggers evacuation**

A \$2 shop in a north Auckland plaza's ceiling collapsed in torrential rain and a "waterfall" poured through damaging goods and narrowly missing staff and customers.

<https://www.stuff.co.nz/auckland/108904727/shopping-centre-roof-collapses-in-downpour-and-waterfall-triggers-evacuation>

### **Severe thunderstorms detected on weather radar**

The MetService has detected severe thunderstorms in the Waikato this afternoon.

A severe thunderstorm warning has been issued for Thames Coromandel, Waikato, Hauraki, Matamata Piako and Western Bay of Plenty areas.

<https://www.sunlive.co.nz/news/194292-severe-thunderstorms-detected-on-weather-radar.html>

### **Hut revenue down after stormy year**

Revenue from backcountry huts has declined after the country was battered by storms earlier this year.

DOC's latest annual report shows revenue from backcountry huts has been flat since 2015/16 and declined by \$33,000 over the past year to \$2,062,000.

<https://www.wildernessmag.co.nz/hut-revenue-down-after-stormy-year/>

### **No drought fear this month for Tararua**

The MetService predicted heavy rain over Tararua Sunday and Monday and rain it did, leaving our district saturated.

[https://www.nzherald.co.nz/the-country/news/article.cfm?c\\_id=16&objectid=12166235](https://www.nzherald.co.nz/the-country/news/article.cfm?c_id=16&objectid=12166235)

### **MetOcean**

#### **New website puts WA on the map for wave energy research**

Information on wave conditions in the Albany and Perth metropolitan area is now publically available through a new website launched by The University of Western Australia's Wave Energy Research Centre in Albany and supported by the Western Australian Government.

<https://www.miragenews.com/new-website-puts-wa-on-the-map-for-wave-energy-research/>

### **NIWA**

#### **Records broken: Cold November rain keeps falling**

Dunedin has set a record for November rainfall.

Niwa climate scientist Nava Fedaeff said Dunedin surpassed its previous wettest November record at 10pm on Saturday.

<https://www.odt.co.nz/news/dunedin/records-broken-cold-november-rain-keeps-falling>

#### **Christmas weather outlook unsettled - but it's a bit hard to tell**

The chances of a lengthy fine spell during the Christmas break aren't looking great, but the lack of a clear el nino weather pattern is leading to caution from forecasters.

Niwa principal scientist - forecasting Chris Brandolino said indications were for perhaps unsettled weather in the week around Christmas, but there could be some good weather during that time.

<https://www.stuff.co.nz/national/108947620/christmas-weather-outlook-unsettled--but-its-a-bit-hard-to-tell>

### **Typical or tropical? NZ's forecast for summer is in**

Climate scientists have given a 50/50 chance of New Zealand enjoying a typical summer – or one even balmy than normal.

Niwa's summer outlook, issued today, also forecast warmer seas and gave a near-certain probability of an "unconventional" and long-lingering El Nino climate system swinging into place over coming months.

[https://www.nzherald.co.nz/environment/news/article.cfm?c\\_id=39&objectid=12167816&ref=rs](https://www.nzherald.co.nz/environment/news/article.cfm?c_id=39&objectid=12167816&ref=rs)

### **Extreme weather (and other news) – Australia and Pacific**

#### **Thousands told to flee 'catastrophic' Queensland fires**

Thousands of Queenslanders were being evacuated from their homes in northeast Australia late yesterday, as bushfires raged across the state amid a scorching heatwave.

[https://www.nzherald.co.nz/world/news/article.cfm?c\\_id=2&objectid=12168120](https://www.nzherald.co.nz/world/news/article.cfm?c_id=2&objectid=12168120)

#### **'Some of the worst I've seen': Sydney has wettest November day since 1984 leaving two people dead**

Two people died, two police officers were injured and Sydney's transport system shut down as the wettest November day since 1984 hit Australia's east coast.

<https://www.stuff.co.nz/world/australia/108949578/some-of-the-worst-ive-seen-sydney-has-wettest-november-day-since-1984-leaving-two-people-dead>

#### **Sydney storms could be making the Queensland fires worse**

A strong low-pressure system has meant severe thunderstorm and hail warnings are in effect for much of the New South Wales South Coast. At the same time, very dry conditions, strong winds and high temperatures are fuelling dozens of bushfires across Queensland.

<https://theconversation.com/sydney-storms-could-be-making-the-queensland-fires-worse-107789>

## **Sydney weather sparks road chaos**

The NSW State Emergency Service has made six flood rescues after drivers became stuck in rising waters across Sydney as an unprecedented downpour saw a month's worth of rain fall in two hours.

<https://www.radionz.co.nz/news/world/377000/sydney-weather-sparks-road-chaos>

## **Heatwatch: extreme heat in Western Sydney**

27 Nov 2018

Mark Ogge, Bill Browne, Travis Hughes

The Australia Institute

The projected rise in extremely hot days because of global warming presents a serious risk to the health and wellbeing of the Western Sydney community. Due to its geography and built environment, Western Sydney already experiences temperatures 6–10 degrees higher than Eastern Sydney during extreme heat events.

At temperatures above 35 degrees, the human body's ability to cool itself reduces, making it a common benchmark temperature for occupational health and safety experts, academic and government researchers.

The number of days per year over 35 degrees in Western Sydney has increased from an average of 9.5 days per year in the 1970s to 15.4 days per year in the last decade. By 2090, days over 35 degrees could more than triple to a projected 52 days, as shown in Figure 1.

<http://www.tai.org.au/sites/default/files/Western%20Sydney%20Heatwatch%20%5BWEB%5D.pdf>

## **Stone fruit season suffering from extreme weather events and low consumer demand**

Drought, hailstorms and high winds are just some of the challenges Australia's stone fruit growers have had to battle this season.

And if national consumer demand does not increase, many growers might have to sell their fresh produce without making a profit.

<https://www.abc.net.au/news/rural/2018-11-29/stone-fruit-season-suffering-from-weather-and-demand/10558942>

## **When a bushfire creates a storm, fire tornadoes, dry lightning and pyrocumulonimbus clouds are just the beginning**

Some of Australia's most devastating bushfires have fuelled their own fury by creating thunderstorm clouds capable of producing dry lightning, violent winds, black hail and even a fire tornado.

<https://www.abc.net.au/news/2018-11-28/bushfire-storms-can-spark-fire-tornadoes-dry-lightning-and-more/10561832>

### **Sydney weather and Queensland bushfire extremes have a common thread**

Despite the extreme differences between the 100mm of rain on Wednesday morning in Sydney and surrounds and the large bushfires threatening people and property in central Queensland today, there is a link according to the Bureau of Meteorology (BOM).

<https://www.abc.net.au/news/2018-11-28/sydney-weather-and-queensland-bushfires-linked/10561792>

### **Extreme weather (and other news) – Asia and the Middle East, Africa**

#### **Vietnam to restrict access to faulty weather forecast app**

Vietnam will restrict use of weather app Windy because it uses a Chinese name for the Hoang Sa Archipelago.

The app refers to Hoang Sa, known internationally as Paracel Islands, as "Sansha."

<https://e.vnexpress.net/news/news/vietnam-to-restrict-access-to-faulty-weather-forecast-app-3844072.html>

### **Extreme weather (and other news) – Americas and Europe**

#### **Most detailed picture yet of UK's future climate**

The UK's most comprehensive picture yet of how the climate could change over the next century has been launched today by Environment Secretary Michael Gove.

<https://www.metoffice.gov.uk/news/releases/2018/ukcp18-launch-pr>

#### **Climate change: UK summers could be over 5C warmer by 2070**

In its first major update on climate change in almost 10 years, the Met Office has warned of significant temperature rises in the decades ahead.

The UK Climate Projections 2018 study is the most up to date assessment of how the UK may change over this century.

<https://www.bbc.com/news/science-environment-46343103>

### **International news and research**

#### **New federal climate assessment for U.S. released**

Report highlights impacts, risks and adaptations to climate change

A new federal report finds that climate change is affecting the natural environment, agriculture, energy production and use, land and water resources, transportation, and human health and welfare across the U.S. and its territories.

<https://www.sciencedaily.com/releases/2018/11/181125113728.htm>

#### **Extreme heat increasing in both summer and winter**

A new study shows extreme heat events both in the summer and in the winter are increasing across the US and Canada, while extreme cold events in summer and winter are declining.

<https://www.sciencedaily.com/releases/2018/11/181126142822.htm>

#### **New insight into ocean-atmosphere interaction and subsequent cloud formation**

Organic compounds undergo drastic variations in their chemical composition as they transfer from the ocean's surface to atmospheric aerosols which act as nuclei to form clouds.

<https://www.sciencedaily.com/releases/2018/11/181126123358.htm>

#### **United Technologies is breaking into 3 independent companies**

NEW YORK - United Technologies is breaking itself into three independent companies now that it has sealed its \$23 billion acquisition of aviation electronics maker Rockwell Collins.

<https://www.wsbradio.com/business/united-technologies-breaking-into-independent-companies/MG23GaKGhbuuGQaw8JzoSK/>

### ***Others***

#### **How Understory builds better weather insights**

Weather data and insights is a huge business. IBM paid an estimated \$2 billion for The Weather Company in 2015. In 2013, in the agriculture world, Monsanto purchased Climate Corporation for \$930 million to get better weather data for crop insurance. Meanwhile, there are dozens of startups trying to use connected sensors and advanced modeling to build better weather insights.

<https://staceyoniot.com/how-understory-builds-better-weather-insights/>

## **Aviation**

### **Queensland sets sights on space industry with outback rocket launch**

Queensland's bid to become the next big player in Australia's push to build a local space industry has taken a giant leap forward with a rocket carrying Australia's first commercial payload launched in the state's southern outback.

[Read more here](#)

### **China develops millimeter-wave cloud radar for new airport**

BEIJING, Nov. 26 (Xinhua) -- China has developed a millimeter-wave cloud radar for Beijing's new international airport, offering weather forecasts with a higher accuracy than previous generations.

[http://www.xinhuanet.com/english/2018-11/26/c\\_137632475.htm](http://www.xinhuanet.com/english/2018-11/26/c_137632475.htm)

### **Earth Networks Selected to Protect Argentina's Air Space and Airport Operations**

Argentine Civil Aviation Authority (EANA) to benefit from severe weather early warning, lightning detection, and data services

<https://www.businesswire.com/news/home/20181127005223/en/Earth-Networks-Selected-Protect-Argentina%E2%80%99s-Air-Space>

## **Government (regional and national)**

### **NZIER sees mixed growth outlook - Quarterly Predictions, December 2018**

NZIER sees mixed growth outlook

Slowing population growth is driving a moderation in economic growth, but several positive factors continue to support demand, as detailed in the latest NZIER Quarterly Predictions. "We have reduced our growth outlook, and now expect annual GDP growth to average around 2.8 percent over the next five years."

[Read more here](#)

## **Hydrology**

### **Flooding likely to become commonplace**

Last week's flooding in Otago may become a regular occurrence, writes Niwa climate scientist Daniel Collins.

<https://www.odt.co.nz/opinion/flooding-likely-become-commonplace>

### **Review into Rotorua floods to be made public next month**

Findings from a review into the April 29 weather event that caused serious flooding within the Ngongotahā catchment are expected to be made public on December 11.

[https://www.nzherald.co.nz/rotorua-daily-post/news/article.cfm?c\\_id=1503438&objectid=12167755](https://www.nzherald.co.nz/rotorua-daily-post/news/article.cfm?c_id=1503438&objectid=12167755)

### **West Otago farmers philosophical about flooding**

The Metservice website shows 140.6ml of rain fell at Oamaru, south of the Pukeuri plant in the last week, and rain more rain is forecast for Wednesday.

<https://www.stuff.co.nz/southland-times/news/108905010/west-otago-farmers-philosophical-about-flooding>

### **Lightning**

#### **3-day int'l meeting on lightning in Jan**

With casualties recorded due to lightning strikes occupying the second most meteorological disaster in India, the Odisha State Disaster Management Authority (OSDMA) in association with the Centre for Environment Climate, Department of Civil Engineering of Siksha O Anusandhan, has planned an international event to discuss on the socio-economic impact of lightning and thunderstorms on individuals and the nation.

<https://www.dailypioneer.com/2018/state-editions/3-day-int---l-meeting-on-lightning-in-jan.html>

### **Innovation and technologies (inc data and new products)**

#### **At Germany fair, PH firm shows innovations in weather forecasting, agriculture**

Addressing pertinent issues in the Philippines through technology, a local company demonstrates its idea of nation-building, and encourages the youth to pursue careers in STEM

<https://www.rappler.com/technology/features/217556-philippine-firm-yongden-technology-corporation-innovations-electronica-2018>

### **Climate change / global warming / sea level rise**

## **Climate change: CO2 emissions rising for first time in four years**

Global efforts to tackle climate change are way off track says the UN, as it details the first rise in CO2 emissions in four years.

<https://www.radionz.co.nz/news/world/376959/climate-change-co2-emissions-rising-for-first-time-in-four-years>

## **'I don't believe it' - Trump dismisses government climate report**

US President Donald Trump says he read parts of a US government report projecting that climate change will cost the country's economy billions of dollars by the end of the century, but he does not believe the economic impacts will be devastating.

<https://www.radionz.co.nz/news/world/376891/i-don-t-believe-it-trump-dismisses-government-climate-report>

## **Climate change 101: The most important things to understand about this urgent problem**

Professor James Renwick, a climate scientist at Victoria University Wellington, says this process is akin to having a blanket on a bed.

"A thicker blanket, a warmer body; a thicker blanket over the earth, a warmer earth."

<https://www.stuff.co.nz/environment/108928681/climate-change-101-the-most-important-things-to-understand-about-this-urgent-problem>

## **Beach Rd**

New Zealanders love the coast.

We've spent decades building stuff hard up against it - underground and on the land. But it's getting too close.

<https://interactives.stuff.co.nz/2018/11/beach-road/>

## **Climate change costs are hitting households through insurance premiums**

Man-made climate change has already lifted house insurance premiums, but nobody knows by how much.

Scientist Rob Bell, from national weather service Niwa, told the Insurance Council annual conference last week that the "shadow" of climate change hung over the rising number of insurance claims from extreme weather events.

<https://www.stuff.co.nz/business/108806185/climate-change-costs-are-hitting-households-through-insurance-premiums>

## **New Zealanders have a 'thin fear' of climate change**

Some of the people most worried about climate change are doing least about it, research suggests.

David Talbot, chief executive of UMR Research, said concern about the issue was "wafer thin" for many Kiwis.

<https://www.stuff.co.nz/business/money/108736999/new-zealanders-have-a-thin-fear-of-climate-change>

## **Reserve Bank voices fears climate change will render homes uninsurable**

The Reserve Bank has warned that some properties may be rendered uninsurable by climate change.

<https://www.stuff.co.nz/business/108931621/reserve-bank-voices-fears-climate-change-will-render-homes-uninsurable>

## **EU climate plan teases €200bn in health savings per year**

Europe stands to avoid €200 billion in healthcare costs every year and significantly reduce premature deaths if the EU ends up adopting an ambitious climate change policy for 2050, according to the European Commission's long-term strategy.

<https://www.euractiv.com/section/health-consumers/news/eu-climate-plan-teases-e200bn-in-health-savings-per-year/>

## **EU's 2050 climate plan sees 'benefits of up to 2% of GDP'**

The impact of the transition to net-zero emissions will be positive for the European economy as a whole, despite the significant additional investments it will require, the European Commission says in its 2050 climate strategy, due to be unveiled later today (28 November).

<https://www.euractiv.com/section/electricity/news/eus-2050-climate-plan-sees-benefits-of-up-to-2-of-gdp/>

## **Journal and articles online**

### **Meteorological Applications**

#### Accepted Articles

Accepted, unedited articles published online and citable. The final edited and typeset Version of Record will appear in the future.

A Methodology for Sensitivity Analysis of Spatial Features in Forecasts: The Stochastic Kinetic Energy Backscatter Scheme

Caren Marzban, Robert Tardif, Natalia Hryniw, Scott Sandgathe

First Published: 15 November 2018

Objective identification of Mediterranean Cyclones and their trajectories towards Romania

Oana Catrina, Sabina Stefan, Cristian Crăciun

First Published: 14 November 2018

Climate change impact on crop evapotranspiration in Turkey during 21st century

Mărgărit-Mircea Nistor, Marcel Mîndrescu, Dănuț Petrea, Alexandru-Sabin Nicula, Praveen Kumar Rai, Mostafa Ali Benzaghta, Ștefan Dezsi, Gheorghe Hognogi, Cosmin Gabriel Porumb-Ghiurco

First Published: 14 November 2018

Multi-Model Ensemble Predictions of Aviation Turbulence

Luke N. Storer, Philip G. Gill, Paul D. Williams

First Published: 12 November 2018

**Quarterly Journal of the Royal Meteorological Society**

Accepted Articles

Accepted, unedited articles published online and citable. The final edited and typeset Version of Record will appear in the future.

A 4D Feature Tracking Algorithm: a multidimensional view of cyclone systems

S. Gabriela Lakkis, Pablo Canziani, Adrián Yuchechen, Leandro Rocamora, Agustin Caferri, Kevin Hodges, Alan O'Neill

First Published: 22 November 2018

Precipitation Characteristic Changes due to Global Warming in a High-Resolution (16-km) ECMWF Simulation

Xuele Feng, Chuntao Liu, Feiqin Xie, Jian Lu, Long S. Chiu, George Tintera, Baohua Chen

First Published: 16 November 2018

The vertical wave number spectra of potential energy density in the stratosphere deduced from the COSMIC satellite observation

Yan Ying Yan, Shao Dong Zhang, Chun Ming Huang, Kai Ming Huang, Yun Gong, Quan Gan

First Published: 16 November 2018

Local time stepping for a mass-consistent and time-split advection scheme

Michael Baldauf

First Published: 16 November 2018

The intensity and motion of hybrid cyclones in the Australian region in a composite potential vorticity framework

J. F. Quinting, M. J. Reeder, J. L. Catto

First Published: 15 November 2018

Synoptic climatology of hybrid cyclones in the Australian region

J. F. Quinting, J. L. Catto, M. J. Reeder

First Published: 15 November 2018

Speeding up the ensemble data assimilation system of the limited area model of Météo-France using a Block Krylov algorithm

François Mercier, Yann Michel, Thibaut Montmerle, Pierre Jolivet, Selime Gürol

First Published: 14 November 2018

Open Access

Ensemble singular vectors as additive inflation in the Local Transform Kalman Filter (LETKF) framework with a global NWP model

Seoleun Shin, Ji-Sun Kang, Shu-Chih Yang, Eugenia Kalnay

First Published: 13 November 2018

On the stochastic parameterization of short-scale processes

C. Nicolis, G. Nicolis

First Published: 13 November 2018

Impact of Two-way Coupling and Sea-surface Temperature on Precipitation Forecast in Regional Atmosphere and Ocean Model

Benedikt Strajnar PhD, Jure Cedilnik MSc, Anja Fettich MSc, Matjaž Ličer PhD, Neva Pristov MSc, Peter Smerkol PhD, Jure Jerman MSc

First Published: 11 November 2018

Using the hybrid gain algorithm to sample data assimilation uncertainty

P.L. Houtekamer, Mark Buehner, M. De La Chevrotière

First Published: 11 November 2018

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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.

Why 536 Was "the Worst Year to Be Alive"

November 27, 2018 - Science

Historians have long known that the middle of the sixth century was a dark hour in what used to be called the Dark Ages, and an analysis of ice from a Swiss glacier has fingered a culprit.

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### Huge, High-flying "Pseudo-Satellite" Will Stay Up for Months

November 27, 2018 - NBC News

More than an ordinary aerial drone but not quite a satellite, a huge solar-powered airplane with three tails and wings wider than a jumbo jet's will soon be taking to the skies.

[Read MORE](#)

### Extreme Heat Increasing in Both Summer and Winter

November 27, 2018 - American Geophysical Union

A new study shows extreme heat events both in the summer and in the winter are increasing across the U.S. and Canada, while extreme cold events in summer and winter are declining.

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### California Falling Short on Climate Change Goals because Driving Is Increasing, Report Finds

November 27, 2018 - Los Angeles Times

California is failing to meet its goals to reduce vehicle travel, imperiling efforts to achieve ambitious greenhouse gas reduction targets.

[Read MORE](#)

### National Climate Assessment: Will U.S. Water Problems Worsen?

November 27, 2018 - Earth Institute/Columbia University

The report paints a troubling picture of the nation's climate future, including projected droughts and extreme precipitation that could worsen problems with U.S. water supplies and infrastructure.

[Read MORE](#)

Climate change could lead to threefold increase in powerful storms across Europe and North America

November 26, 2018 - EurekAlert!

the impact on local communities could be severe, with more intense and extreme storms leading to greater large-scale flooding events -

[Read MORE](#)

What You Need To Know About The New U.S. Climate Assessment

November 26, 2018 - National Public Radio

action," says Brenda Ekwurzel, a co-author and senior climate scientist at the Union of Concerned Scientists. The report states that more

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Federal Climate Report Lays Out Wide-Reaching Impacts for an Energy System in Flux

November 26, 2018 - Greentech Media

under the U.S. Global Change Research Program, note negative impacts of extreme weather events on power generation and transmission systems,

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The Arctic is turning brown because of weird weather – and it could accelerate climate change

November 26, 2018 - Phys.org

events in the Arctic has global consequences. It is clear that our current efforts to tackle climate change are dangerously inadequate, but

[Read MORE](#)

How a dust storm and hazardous air quality can harm your health

November 26, 2018 - Phys.org

Sydney on Thursday resembled those seen during intense bushfire activity and the massive 2009 dust storm. The NSW government updated its

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Here's what you may not have heard about the massive new report on climate change in the U.S.

November 25, 2018 - Discover Magazine Blogs

billions of people worldwide — will feel the impacts of climate change. I teach science journalism at the University of Colorado, and if a

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3 big takeaways from the major new US climate report

November 24, 2018 - Vox

surprising, but it includes new research that more directly highlights humanity's role in extreme weather events and measures how future

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Federal climate change report paints grim picture for Midwest

November 23, 2018 - Chicago Tribune

year when it received funding from the state of New York, Columbia University's Earth Institute and the American Meteorological Society to

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Wildfire much worse because of climate change, new report finds

November 23, 2018 - Los Angeles Times

temperatures, rising sea levels, worsening wildfires, more intense storms and other cascading effects harm our ecosystems, infrastructure

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[Climate Change Is Already Bad For The US Economy, A New Study Says](#)

November 23, 2018 - Buzzfeednews

the US. This means more damaging wildfires in California, more storms dumping intense rain on Texas, more coastal flooding at high tides in

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[As Nepal warms, a new health threat looms: dengue fever](#)

November 23, 2018 - ReliefWeb

he said. Purna Prasad Devkota, a weather officer at the regional agricultural research station in Lumle, said average temperature is now

[Read MORE](#)

[Paradise fire is deadliest U.S. wildfire in 100 years; eerily similar to 1918 inferno that killed 453](#)

November 22, 2018 - The Mercury News

1994 (South Canyon Fire, Colorado) Source: Jeff Masters, co-founder Weather Underground  
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[Building the ultimate record of the ocean](#)

November 22, 2018 - Phys.org

progress report of sorts on ECCO efforts in The Bulletin of the American Meteorological Society, where they detail the best record of ocean

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[Giant dust storm sweeps across Australian state](#)

November 22, 2018 - MSN.com

New South Wales Bureau of Meteorology Satellite image from the Australia's Bureau of Meteorology shows a dust storm cloud over New South

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[Weather milestones throughout human history](#)

November 21, 2018 - Fox 5 NY News

of these storms." On April 1, 1960, the era of satellite meteorology began. NASA successfully launched Tiros-1, the first satellite capable

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[Changes are coming to the sun with start of solar cycle 25 - KTAR.com](#)

November 21, 2018 - Ktar.com

We may be heading to a period of less intense maximums and lower number of sunspots and dangerous solar storms. This is good news, as we

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[Meteorologists share their strategies for avoiding winter travel hazards](#)

November 21, 2018 - The Washington Post

the entire nation.” The importance of research was a common theme among the experts I interviewed. Meteorologists spend a little extra time

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[Pacific Ocean typhoons could be intensifying more than previously projected](#)

November 21, 2018 - Phys.org

increase in the proportion of intense typhoons helps scientists understand the hazards posed by devastating storms in the north Pacific

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[Smog or Heat for the Winter: Northern China Faces a Grim Choice](#)

November 21, 2018 - OZY

target, saying that last year’s big drop in air pollution had been aided by advantageous weather conditions that may not be repeated this

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