

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

### *MetService mentions*

#### **Warm seas fuelling major changes in weather patterns around NZ**

MetService meteorologist Georgina Griffiths told Stuff changes in the atmosphere were all around, but might take time to directly affect New Zealand.

#### **No relief from bone-dry conditions in Nelson/Tasman**

Forecaster Rob Kerr said a front would move up the country on Sunday. But the pattern in force since last month has been for fronts to weaken by the time they reach Nelson.

#### **NZ-led research shows extreme weather could worsen**

New Zealand-led research shows unpredictable extreme weather could worsen as major ice sheets melt.

### *MetOcean*

#### **European waters drive ocean overturning, key for regulating climate**

An international study reveals the Atlantic meridional overturning circulation, which helps regulate Earth's climate, is highly variable and primarily driven by the conversion of warm, salty, shallow waters into colder, fresher, deep waters moving south through the Irminger and Iceland basins. This upends prevailing ideas and may help scientists better predict Arctic ice melt and future changes in the ocean's ability to mitigate climate change by storing excess atmospheric carbon.

#### **Argo ocean floats achieve 2 million profiles in 20 years, support new research on ocean heat**

An international effort delivering an unsurpassed look at changes occurring in the ocean worldwide has achieved a major milestone as it marks its 20th anniversary. The Argo programme, which...

#### **Much of the surface ocean will shift in color by end of 21st century**

Climate change is causing significant changes to phytoplankton in the world's oceans, and a new study finds that over the coming decades these changes will affect the ocean's color, intensifying its blue regions and its green ones. Satellites should detect these changes in hue, providing early warning of wide-scale changes to marine ecosystems.

#### **'Drifters' getting caught in rips for safer swimming**

On average five people are killed in rip currents each year. Of approximately 700 rescue missions, surf lifeguards attribute around 85 to these fast offshore flows of water. University of Canterbury Coastal Geomorphologist Dr Seb Pitman is developing a way of mapping these rip tides on Muriwai beach and joined Kathryn Ryan to discuss how his GPS 'drifters' could predict rips and make sea swimming safer.

*NIWA*

### **Meteorologist says heatwave to thank for marlin being caught again**

As the supposed 'heatwave' flooded New Zealand, so did the number of marlin being caught off the west coast of the central North Island.

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

#### **Perth weather to soar into high 30s in the longest run of hot days since 2014**

Perth is about to experience a five-day streak of temperatures above 35 degrees Celsius for the first time in five years, and the temperature will not settle down until next week at the earliest.

#### **Queensland's floods are so huge the only way to track them is from space**

(MENAFN - The Conversation) Many parts of Queensland have been declared disaster zones and thousands of residents evacuated due to a 1-in-100-year flood. Townsville is at the epicentre of the 'unprecedented' monsoonal downpour that brought more than a year's worth of rain in just a few days, and the emergency is far from over with yet more torrential rain expected.

#### **Climate change is poised to deliver more Black Saturdays in decades to come**

Scott Hamilton, University of Melbourne

Black Saturday in 2009 was Australia's worst bushfire tragedy. But climate projections predict more bushfire danger in the future, threatening our water supplies as well as homes.

#### **• Dry lightning has set Tasmania ablaze, and climate change makes it more likely to happen again**

Nick Earl, University of Melbourne; Peter Love, University of Tasmania; Rebecca Harris, University of Tasmania; Tomas Remenyi, University of Tasmania

Climate change is making Tasmania more vulnerable to brutal fire conditions.

#### **Could climate change make Australia uninsurable?**

Townsville is underwater and large parts of Tasmania are on fire. As fires, floods and crazy weather become more frequent and severe, is Australia on its way to being uninsurable?

### **Australia: Historic flooding to continue, worsen across Queensland this week**

Record-setting rainfall in recent days has led to widespread flooding, land slips, road closures and evacuations across Queensland. Flood dangers and travel disruptions will continue with little change expected this week.

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

#### **High tech weather network giving New Yorkers better weather information**

ALBANY, N.Y. (WRGB) – There's lots of weather toys for weather boys and girls to check out. Not really toys, actually, but instead the pieces that help put together the New York State Mesonet program.

#### **Flood risk to homes as heavy downpours and gale-force 60mph winds are set to batter Britain today**

Fog and frost will be slow to clear through this morning with wet and windy conditions expected later on

Wind gust of 59 mph recorded at Berry Head in Devon and Met Office says wind and rain will sweep across UK

Environment Agency has issued five flood alerts across Somerset, Cambridgeshire, the River Avon and Bristol

#### **Winds up to 50 metres per second expected in today's storm**

A yellow weather warning has been issued by the Iceland Met Office in South and South East Iceland today. Winds of up to 50 metres per second are expected at the worst. The winds pick up at 1 pm and reach a peak at around 7 pm and should go down during the night.

### **International news and research**

#### **Extreme rainfall events are connected around the world**

An analysis of satellite data has revealed global patterns of extreme rainfall, which could lead to better forecasts and more accurate climate models.

#### **To predict droughts, don't look at the skies. Look in the soil... from space**

Another summer, another drought. Sydney's water storages are running on empty, and desalination plants are being dusted off. Elsewhere, shrunken rivers, lakes and dams are swollen with rotting fish. Governments, irrigators and environmentalists blame each other for the drought, or just blame it on nature.

### **Forecast suggests Earth's warmest period on record**

The forecast for the global average surface temperature for the five-year period to 2023 is predicted to be near or above 1.0 °C above pre-industrial levels, says the Met Office.

### **The Rise Of Wind Chill Temperature Denial**

Last week, bitterly cold air associated with a Polar Vortex intrusion dominated headlines and social media. Everyone was talking about it and rightfully so given the dangerously wind chill temperatures. Interestingly, I noticed "an anti-wind chill factor" narrative emerging.

### **New scale to characterize strength and impacts of atmospheric river storms**

A team of researchers has created a scale to characterize the strength and impacts of the weather phenomenon known as 'atmospheric rivers.'

### **Last 4 years hottest on record, U.N. confirms**

'The degree of warming during the past 4 years has been exceptional, both on land and in the ocean,' says World Meteorological Organization Secretary-General Petteri Taalas

### **Deep inside the deadly avalanche that climate change built**

Climate change is altering the nature of avalanches. High in the Swiss Alps, one group of scientists is racing to understand what's going on

## **WMO**

### **2019 starts with extreme, high-impact weather**

The start of 2019 has been marked by high impact weather in many parts of the world, including dangerous and extreme cold in North America, record heat, wildfires and rainfall in Australia,...

## **Others**

AccuWeather Promotes John Dokes to Chief Content Officer & President of AccuWeather Network, Announces Strategic Reorganization

Media Content Group and new role of Chief Content Officer established to ensure quality, consistency and reliability of content across expanding news, video properties and growing AccuWeather Network

### **Air quality / air pollution**

#### **A warming world increases air pollution**

The new study shows that the contrast in warming between the continents and sea, called the land-sea warming contrast, drives an increased concentration of aerosols in the atmosphere that cause air pollution.

### **Business/Insurance**

#### **Insurance Company Advisor Cuts Out the Middle Man**

A risk analysis consultancy long focused on construction delays has branched out to apply its chops to the development of a hyperlocal software-as-a-service weather risk-management system for construction that launched Jan. 29. The developers partnered with the Associated General Contractors of America to ground-truth the software with industry users. They claim the system can help contractors predict and mitigate downtime or damage due to foul weather delays.

#### **Brands like Apple and Molson Coors think a future of extreme weather and climate disasters will be profitable**

Major brands are finding ways to make money on the fears surrounding and consequences of climate change.

In disclosures to CDP - a nonprofit that asks companies about their environmental impact - companies like Apple, Disney, and Philip Morris identified ways that they could profit from natural disasters, extreme weather, and the need to reduce carbon emissions associated with climate change.

In many cases, brands saw addressing climate change as a way to improve their public image.

### **Communications/social media**

#### **National Weatherperson's Day: Recognizing meteorologists across the field**

TALLAHASSEE, Fla. (WCTV) -- February 5 marks National Weatherperson's Day. It is held on the birthday of John Jeffries. He was known as one of America's first weather observers. According to the National Weather Service, Jeffries started keeping daily weather observations in 1774. He took the first balloon observations in 1784.

### **Energy and Mining**

### **Heatwave hammers grid, causes power cuts across Hamilton**

Hamilton's run of scorching days has put major strain on the city's power grid and left some residents relying on generators.

### **How Oncor and IBM will prevent weather-related power outages**

Dangerous storms and high winds can cause vegetation to interfere with above-ground power lines. A new computer model can identify trees that require trimming.

### **Farming/horticulture/Aquaculture**

#### **Drought bites crops in Tasman with little respite forecast for growers**

Growers are battling to keep crops alive on the Waimea Plains as the drought continues to bite in Tasman district, with no sign of a significant break in the prolonged dry spell.

#### **Global apple & pear breeding programme heats up**

New, superior tasting apples and pears that can thrive in the planet's increasingly warm climate will soon be available to fruit growers worldwide.

### **Health**

#### **Hurricane Katrina's aftermath included spike in heart disease hospitalizations**

Hospitalizations for cardiovascular disease rose precipitously in Orleans and Jefferson parishes after Hurricane Katrina. The increase in rates lasted for more than one month after landfall and rates were higher among the older black population, compared to the older white population.

#### **Climate change may increase congenital heart defects**

The rise in temperatures stemming from climate change may increase the number of US infants born with congenital heart defects between 2025 and 2035. The greatest percentage increases in the number of congenital heart defects are predicted in the Midwest, followed by the Northeast and the South.

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

##### **Windshield Wipers More Accurate than Weather Radar for Monitoring Rainfall**

A fleet of cars equipped with cameras and networked sensors gather data on local rainfall.

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

## **Tuesday briefing: We will lose a third of the Himalayas' glaciers**

The best-case scenario predicts a that a third of Himalayan glaciers will be lost by 2100, the European Commission has ordered the recall of a data-leaking kids' smartwatch

## **British chips shrink by an inch as climate change slashes potato yields**

'Farmers are used to dealing with fluctuations in the weather but if we have two or three extreme years in a row it has the potential to put growers out of business'

## **Met Office: global warming could exceed 1.5C within five years**

The Guardian

In the five-year forecast released on Wednesday, the Met Office highlights the first possibility of a natural El Niño combining with global warming to ...

## **Journal and articles online**

The January Issue of the **Australian Journal of Emergency Management** is now online.  
of interest to staff may be:

Applying science to build resilience to tropical cyclones

During 2018, Geoscience Australia updated the Tropical Cyclone Hazard Assessment to better calculate the likelihood of tropical cyclones in Australia. These assessments allow users to apply nationally consistent data to disaster risk reduction activities.

## **Weather**

Early View

Online Version of Record before inclusion in an issue

What is the El Niño–Southern Oscillation?

Eric Guilyardi, Adam Scaife, Michelle Cain, Alyssa Gilbert, the Climate Science Communications Group

Version of Record online: 23 January 2019

Climate sensitivity: how much warming results from increases in atmospheric carbon dioxide (CO<sub>2</sub>)?

Ed Hawkins, Piers Forster, the Climate Science Communications Group

Version of Record online: 22 January 2019

**Weather**  
**Volume 74, Issue 2**

Pages: E1, 42-58, i-iv, 59-76, E2-E4

February 2019

First Published: 05 February 2019

In this issue of Weather

Jim Galvin

Pages: E1 | First Published: 05 February 2019

Weather news

Pages: 42 | First Published: 05 February 2019

Research Articles

Possible mechanisms for fog formation over Borg El Arab airport, Egypt

Tarek Sayad, Mostafa Morsy

Pages: 43-50 | First Published: 20 June 2018

The locations of Borg El Arab, Alexandria and Cairo International airports in Egypt. (Source: Google Maps.)

An opinion based cross-regional meteorological event detection model

Yifan Zhu, James Chambua, Hao Lu, Kaize Shi, Zhendong Niu

Pages: 51-55 | First Published: 04 December 2018

Viewpoint

Sir William Crookes and his radiometer

Gerald Stanhill

Pages: 56-57 | First Published: 18 July 2018

Weather images

Pages: 58 | First Published: 05 February 2019

Weather log

December 2018 Very mild, dull and wet in southwest; mild, dry and sunny in northeast

Pages: i-iv | First Published: 05 February 2019

Seasonal Weather Summary

UK annual weather summary

National Climate Information Centre

Pages: 59 | First Published: 05 February 2019

Research Articles

Case studies of springtime fog in Hong Kong

P. W. Chan, Q. S. Li

Pages: 60-67 | First Published: 20 July 2018

Ice halos in history and superstition plus fire halos

Mila Zinkova

Pages: 68-73 | First Published: 30 April 2018

8 April 1233 England halo display drawn by Matthew Paris (Lewis, 1987).

Book review

Sylvia Knight

Pages: 73 | First Published: 01 November 2018

Letter

Meeting report

The Indian monsoon: atmospheric dynamics, aerosol and the ocean

Simon. C. Peatman

Pages: 75 | First Published: 08 May 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. Searchable archives are [available online](#).

February 5, 2019

News

The Rise Of Wind Chill Temperature Denial

February 5, 2019 - Forbes

Last week, bitterly cold air associated with a Polar Vortex intrusion dominated headlines and social media. Everyone was talking about it and rightfully so given the dangerously low wind chill temperatures.

Read MORE

When Snakes and Scientists Battled to Predict the Coldest Chicago Winter on Record

February 5, 2019 - Atlas Obscura

In the early 20th century, meteorologists squared off with “weather sharps.”

Read MORE

Why We Can't Stop Talking about California's Sierra Snowpack

February 5, 2019 - KQED

As of this week, water stored in accumulated Sierra snows was running just about average for late January, and amounted to about 60 percent of the average on April 1, when the snowpack is typically at its peak for the year.

[Read MORE](#)

[Study: Airplanes Flying Over Rain, Snow Can Intensify Precipitation by 10-Fold](#)

February 4, 2019 - Sci-News.com

A research team led by University of Helsinki scientists has discovered that planes landing in or departing from an airport could locally increase precipitation rate by 6–14 times.

[Read MORE](#)

[The Meteorological Culprits Behind Strange and Deadly Floods](#)

February 4, 2019 - Eos - Earth and Space Science News

A new study examines how unusual meteorology interacted with topography and other local conditions to generate some of the most devastating floods in American history.

[Read MORE](#)

[Underwater Drones Could Transform Hurricane Forecasts](#)

February 3, 2019 - The Atlantic

In August 2011, with Hurricane Irene bearing down on the mid-Atlantic coast, Scott Glenn, an ocean-engineering researcher at Rutgers University, made a bold decision.

[Read MORE](#)

[Super models: How new technology – and forecasters – got the blizzard right](#)

February 3, 2019 - The Buffalo News

The Blizzard of 2019 wasn't without tragedy. At least three people died as a result of the storm. But did the precision and timing of the forecast save other lives?

[Read MORE](#)

[What is a frost quake?](#)

February 1, 2019 - Mother Nature Network

The name may sound like what happens when an ice dragon lands on the ground during an episode of "Game of Thrones," but it's nothing of the sort. It's actually the combination of the cold temperatures, water and physics at work.

[Read MORE](#)

[Scientists just cleared up a mystery about aurorae](#)

February 1, 2019 - Astronomy Magazine

Though you may assume the northern and southern lights should mirror each other, researchers have finally shown why this is not always the case.

[Read MORE](#)

['Unprecedented': Australia Just Recorded Its Hottest Month on Record in January](#)

February 1, 2019 - The Weather

As the Midwestern U.S. shivers in the coldest Arctic air the region has seen in decades, Australia just sweat through its hottest month on record and saw wildfires continually scorch the drought-stricken south and floods soak the tropical north in January.

[Read MORE](#)

[Minnesota Kids Attempt to Set Guinness World Record For Coldest Hockey Game Played](#)

February 1, 2019 - The Weather Channel

A group of 20 Minnesota hockey players braved temperatures as low as minus 28 degrees to attempt a record for coldest hockey game played in the Guinness Book of World Records.

[Read MORE](#)

[How Trees Fare in Big Hurricanes](#)

February 1, 2019 - The Scientist Magazine

Forests are resilient, but researchers wonder if climate change will outpace their adaptations.

[Read MORE](#)

[A sub-zero 7 a.m. science experiment on Lake Mendota: Meet UW-Madison's "weather weenies"](#)

January 31, 2019 - WiscNews

“It was actually a beautiful sight even though none of us could feel our toes,” said atmospheric and oceanic sciences professor Ankur Desai.

[Read MORE](#)

[Think it's hard for you to deal with the cold weather? Imagine being a farmer](#)

January 31, 2019 - Yahoo! News

In this extreme cold, safety experts say you shouldn't stay outside for more than a few minutes at a time. But often farmers don't have that choice, especially when they need to care for their livestock.

[Read MORE](#)

[Climate Modeling Pioneer Leads as Role Model Too](#)

January 31, 2019 - Eos - Earth and Space Science News

For 60 years atmospheric scientist Warren M. Washington has conducted groundbreaking climate modeling—and launched brilliant careers.

[Read MORE](#)

[China launched world's first rocket-deployed weather instruments from unmanned semi-submersible vehicle](#)

January 31, 2019 - Phys.org

For the first time in history, Chinese scientists have launched a rocketsonde from an unmanned semi-submersible vehicle that has been solely designed and specially developed by China for this task.

[Read MORE](#)

[With Cold War tension high, a young weatherman was all that stood between America and space](#)

January 31, 2019 - Daily Press

On the morning of Jan. 29, 1958, the Army had 48 hours left to deliver — and it planned to launch. But John Meisenheimer, the range's only meteorologist, wasn't budging.

[Read MORE](#)

Predicting a Polar Vortex Is a Modern Triumph

January 30, 2019 - The Atlantic

It is dangerous, record-breaking, can't-look-away weather. Yet this cold snap's arrival was preceded by a marvel so spectacular that we hardly noticed it: It was correctly predicted.

Read MORE

Stroke Deaths Rise, Life Expectancy Falls with Polluted Air

January 30, 2019 - Eos - Earth and Space Science News

The connection between poor air quality and higher stroke mortality was strongest in southern states across a region known as the "stroke belt."

Read MORE

Talk about the polar vortex! A list of the coldest weather ever recorded in each state

January 30, 2019 - USA Today

Most state record lows have lasted for decades, in some cases over a century, and as U.S. average temperatures continue to rise, record high temperatures being set are exceeding record low temperatures by a ratio of 2:1.

Read MORE

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My latest WeatherEye by John Maunder

<https://www.sunlive.co.nz/blogs/12944-groundhog-day-february-2-2019-those-climate-predictions.html>

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