

New Zealand weather and climate news

MetService mentions

And now for the weather, in Picton, as new station ready to go

Picton's new weather station is forecast to provide Marlborough residents with regular readings from the port town early next month.

Weekend brings rain, cold southerly gales, even some snow

"With TC Oma staying away it leaves the door open to a low-pressure system developing from the south Tasman Sea, approaching us this weekend," MetService meteorologist Tui McInnes said.

Cyclone Oma destruction will be 'devastating' if it hits New Zealand but forecasts still unclear

Meteorologist William Nepe said the category two system was near New Caledonia at the moment, where winds were blowing at 92km/h.

Heavy rain, cold snap on the way for South

MetService meteorologist Mark Bowe said heavy rain was also expected around the headwaters of Otago rivers and lakes, where a heavy rain watch in place.

Tropical cyclone's path closely monitored but its path is still far from certain

MetService meteorologist Lisa Murray said they were keeping a close eye on tropical cyclone Oma, currently active near Vanuatu, but said there was not yet any cause for alarm.

MetOcean

Drifting wave buoys pass the Drake Passage

In February 2018, MetOcean Solutions deployed five solar powered wave buoys (Spotters) in the Southern Ocean in partnership with Spoondrift and the Defence Technology Agency. Now, one year later, these buoys have travelled more than 6500 km and are currently crossing the stormy waters of the Drake Passage, the body of water between South America's Cape Horn and the South Shetland Islands.

NZ scientists awed at buoys' 6500km, year-long journey

Solar-powered wave buoys dropped in the world's strongest ocean current have drifted an incredible 6500km in just a year, wowing Kiwi oceanographers.

Ocean variability and air-sea fluxes produced by atmospheric rivers

Toshiaki Shinoda,

Luis Zamudio,

Yanjuan Guo,

E. Joseph Metzger & Chris W. Fairall

Scientific Reports volume 9, Article number: 2152 (2019)

Atmospheric rivers (ARs) cause heavy precipitation and flooding in the coastal areas of many mid-latitude continents, and thus the atmospheric processes associated with the AR have been intensively studied in recent years. However, AR-associated ocean variability and air-sea fluxes have received little attention because of the lack of high-resolution ocean data until recently. Here we demonstrate that typical ARs can generate strong upper ocean response and substantial air-sea fluxes using a high-resolution (1/12°) ocean reanalysis.

Extreme weather (and other news) – Antarctica and offshore islands

Scientists return from Antarctic voyage

After travelling almost 12,000km in the past six weeks, a group of scientists returns to Wellington at the weekend with new knowledge about life in the Ross Sea of Antarctica.

Lakes of Melted Snow Are Literally Bending Antarctica's Ice Shelves in Half

On Jan. 31, 2002, a vast crescent of ice about the size of Rhode Island splintered off of the coast of Antarctica and spilled a flotilla of massive, melting icebergs into the sea. By March, some 1,250 square miles (3,250 square kilometers) of ice had melted away from the continent's edge, undoing more than 10,000 years of growth and stability in a little more than a month.

Extreme weather (and other news) – Australia and Pacific

National drought map

30 Jan 2019 | Website

Joint Agency Drought Taskforce, Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Data 61

Department of the Prime Minister and Cabinet (Australia)

The National Drought Map is a new online tool that brings together population data and information on drought conditions in Australia.

Economics, Health, Natural environment, Social issues

Cyclone Oma to bring gale-force winds but may not cross Queensland coast, BOM says

The chance of Tropical Cyclone Oma making landfall on the southern Queensland coast is decreasing, the Bureau of Meteorology says.

The category-two system is currently 960 kilometres north-east of Brisbane and is still moving towards the city.

Cyclone Oma is not the first cyclone to threaten Brisbane

Cyclone Oma is tracking towards the southern coast of Queensland and the state capital of Brisbane, which many Australians may think is far away from the tropics and cyclone danger. But that is definitely not the case.

Flood-ravaged north-west Queenslanders urge BOM to fix radar 'black spots'

In the wake of the devastating flooding in Queensland's north-west, concerns have surfaced about radar 'black spots' between Mount Isa and Townsville — cities some 950 kilometres apart.

Henry Phillipot: meteorologist of fire and ice

The Sydney Morning Herald

He was the last of the Australian weather forecasters at General ... highly innovative approaches using the new US weather satellites for mapping the ...

Owners say weather caused ship grounding in Solomons

The Hong-Kong based owners of a ship that ran aground in the Solomon Islands have denied reports that a navigation error caused it to hit the reef off Rennell Island.

First February typhoon since 2015 may threaten Guam, Northern Mariana Islands

AccuWeather.com

The tropics in the western Pacific Ocean may activate this week with ... Latest indications point toward an area of disturbed weather organizing into a ...

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

Expert issues warning about dangerous weather

Viet Nam News

The National Centre for Hydro-Meteorological Forecasting, in co-ordination with provincial weather departments and the media, has regularly updated ...

Singapore unveils expansionary Budget 2019 to boost economic transformation

The Singapore government has unveiled an expansionary budget for fiscal year 2019, focused on enhancing the capabilities of its companies and workers as the country transforms its economy for a digital future.

Thailand begins planning ahead for next “smog season” in Bangkok | #AsiaNewsNetwork

Eleven Myanmar

Thailand begins planning ahead for next “smog season” in Bangkok | # ... would again be shrouded in pollution next winter, when weather conditions were ... unless the smog problem is dealt with at its sources, Thailand would suffer ...

AccuWeather 2019 Asia spring forecast

AccuWeather.com

The storm track that was active during the winter from the eastern Mediterranean to the Middle East to part of eastern Asia will continue well into the ...

Water shortages affect paddy fields

The Phnom Penh Post

... Water Resources and Meteorology, which found that rising temperatures caused by climate change and the El Nino phenomenon would prolong the ...

Thailand braces for hot weather

Borneo Bulletin Online

BANGKOK (Bernama) – The Thais have been told to brace themselves for hot weather as temperatures are forecast to soar in the kingdom starting ...

Weather Service Doubles Up on Cray Supercomputer

When it comes to weather forecasting and climate modeling, supercomputer maker Cray has plenty of stories to tell...

To add to that bucket, South African Weather Service's (SAWS) has performed a major upgrade of its Cray XC30 supercomputer, doubling its computational horsepower and tripling the system's storage capacity. The expanded system now has 48 Xeon-powered compute blades and 1.8 petabytes of ClusterStor storage. The upgrades were delivered in March 2018 and the entire system was relocated to a new datacenter the following month.

Ghana Meteorological Agency gets 10 new automatic weather stations

GhanaWeb

Speaking at the commissioning ceremony at the Tema District Met office where one of the AWS was installed, Communications Minister Mrs. Ursula ...

Extreme weather (and other news) – Americas and Europe

Recent Storms Part Of What Meteorologists Call 'The Pineapple Express'

CBS Los Angeles

Lots of warm weather and a lot of rain adds up to what meteorologists call the Pineapple Express. Rachel Kim talks to one weather expert to find out ...

Tornado fatalities continue to fall, despite population growth in Tornado Alley

Phys.Org

A new weather radar was installed on top of Wang Hall in 2018, filling a gap in coverage, as Purdue is roughly 60 miles from the nearest National ...

Over two-thirds of people think Met Éireann should report weather warnings for the six counties

thejournal.ie

At present, the UK's Met Office issues weather warnings for the counties in Northern Ireland but it has been suggested that these could be incorporated ...

Jet Stream Winds from Southwest to Northeast US Among the Highest on Record

The Weather Channel

A weather balloon launched by the National Weather Service office east of New York City in Upton, New York, at 7 p.m. EST Monday night measured ...

International news and research

To conserve energy, AI clears up cloudy forecasts

ITHACA, N.Y. - If the forecast calls for rain, you'll probably pack an umbrella. If it calls for cold, you may bring your mittens. That same kind of preparation happens in buildings, where sophisticated heating and cooling systems adjust themselves based on the predicted weather.

5 local meteorologists recall the most insane weather they've ever covered

Boston.com

Predicting the weather in the Boston area is undoubtedly one of the toughest gigs around. Local meteorologists must suffer the wrath of Bostonians ...

Euro Vs. GFS: The Weather Model Wars Take A New Turn In March

Forbes

It is well documented that the European model (run by the European Center for Medium-Range Weather Forecasts or ECMWF) has historically ...

The Weather Service prepares to launch prediction model that many forecasters don't trust

Washington Post

The Weather Service announced Wednesday that the model, known as the GFS-FV3 (FV3 Act Reauthorization, which establishes the NOAA Earth Prediction Innovation Center, aimed at further enhancing prediction capabilities.

What's The WMO And Why Does The US National Weather Service Director Want To Lead It?

Forbes

The World Meteorological Organization (WMO) is an intergovernmental organization with a membership of 192 Member States and Territories.

WMO

Ministerial conference seeks to enhance investment in African meteorological services

The World Meteorological Organization (WMO)) and the African Union Commission (AUC) in collaboration with the Government of Egypt are convening the 4th African Ministerial Conference on Meteorology...

Three Ways Forward to Improve Regional Information for Extreme Events: An Early Career Perspective

The paper emerged from discussions during the three-day Young Earth System Scientists - Young Hydrologic Society (YESS-YHS) workshop, which was conjointly held with the Global Energy and Water...

Special Climate Statement 69—an extended period of heavy rainfall and flooding in tropical Queensland - Australian Government

An unusual, extended period of heavy rainfall over large areas of tropical Queensland began in late January 2019 and continued into February. The heavy rainfall was associated with an intense and...

Kickoff Meeting of Papua New Guinea CREWS Project

Developing countries, least developed countries (LDCs) and small island developing states (SIDS) are particularly vulnerable to impact of climate extremes, including drought which could lead to water...

Aviation

Up, up and away: Meteorology students launching dozens of weather balloons for aircraft icing ...

NIU Newsroom

The weather balloon observations will be used to decide optimal times for flights by a high-tech research aircraft taking off from Chicago Rockford ...

ExecuJet Expands Business Aviation Operations to Antarctica

AviationPros.com

Before embarking on the five-and-a-half hour flight to the subcontinent, customers will receive a full weather briefing and run-down of the day's ...

IHSF outlines 8 rules about weather and helicopter flights

Vertical Magazine (press release)

Aviation forecasts are a central tool to help pilots identify anticipated weather threats and put in place a strategy to mitigate those threats during the ...

Business/Insurance

Suncorp lifts disaster budget as climate change hits insurers

The Sydney Morning Herald

Suncorp is lifting its budget for natural disaster claims by \$100 million and buying extra reinsurance to shield its business from wild weather, in part ...

Energy and Mining

Meridian buys power from rival Genesis amid strong demand, declining storage

sharechat

The hot, dry weather has seen more use of air conditioning and irrigation systems, increasing electricity demand. But at the same time it has caused ...

Warmer, wetter weather from climate change will impact energy use, researchers say

INDIANAPOLIS — Hoosiers will heat homes and businesses less but rely more on air conditioning as Indiana's climate warms, said a group of Purdue University researchers.

One in the eye: Mining's cyclone peril

One of the worst tropical cyclones in Australian history, the Category 5 ... Mine sites in vulnerable areas, such as coastal and inland Queensland and the ... of buildings on site to make sure they are compliant with safety regulations.

Lightning

Atmospheric sprite lightning captured on camera in rare and spectacular display in the Kimberley

A Kimberley photographer has captured a spectacular and rare atmospheric phenomenon that has been described as nature's giant neon sign.

Satellites and radar

GOES-17 Is Now Operational – Here's What It Means for Forecasting

WeatherNation

Since then, forecasters have been using GOES-17 data to see weather forming ... Just as GOES-16 data helped airlines mitigate flight delays at San ...

Cyber security and IoT

IoT Technology Tracks Weather, Air Quality in Cities

RFID Journal

Understory's Atmosphere solution, consisting of wireless weather and air-quality sensors, as well as cloud-based software and apps, is being tested in ...

Innovation and technologies (inc data and new products)

How IoT Innovators Can Transform The Insurance Industry

Forbes

Using IoT And Other Technologies To Bridge The Gap ... By looking at weather-predicting technologies, insurance companies could help homeowners ...

Argonne's Innovative Community Software Is on Weather Scientists' Radar

ECNmag.com

In 2015, the Python-ARM Radar Toolkit (Py-ART) made its open-source debut. After 4 years, and with contributions from 34 individual editors, it is now ...

Climate change / global warming / sea level rise

Climate change will move New Zealand weeds

Scholars have long suspected that many invasive plants species will benefit and suffer from climate change in New Zealand.

Climate change increases potential for conflict and violence

Images of extensive flooding or fire-ravaged communities help us see how climate change is accelerating the severity of natural disasters. Researchers say what is not as clear is the indirect effect of these disasters and rapid climate change on violence and aggression. They have identified three ways climate change will increase the likelihood of violence.

Jim Salinger Q&A: Why we must hasten action on climate change

A new study led New Zealand's top climate scientists has explored last year's record-hot summer – and why it's relevant to our future under climate change. Its lead author, Professor Jim Salinger, answered these five key questions.

New scheme targets greenhouse gases

The Environmental Protection Authority (EPA) is supporting international efforts to help cool the planet with new regulations coming into force today.

After 31 December 2019, a permit will be required for new and recycled bulk imports or exports of 18 different hydrofluorocarbon (HFC) gases, which are used in both refrigeration and air-conditioning units.

Climate change declaration 'politically charged' - Thames-Coromandel mayor Sandra Goudie

A push to get local authorities to sign up to a declaration on climate change is "politically charged and driven", the Thames-Coromandel mayor says.

How climate change can make catastrophic weather systems linger for longer

Many parts of Australia have suffered a run of severe and, in some cases, unprecedented weather events this summer. One common feature of many of these events – including the Tasmanian heatwave and the devastating Townsville floods – was that they were caused by weather systems that parked themselves in one place for days or weeks on end.

It all began with a blocking high – so-called because it blocks the progress of other nearby weather systems – in the Tasman Sea throughout January and early February.

Journal and articles online

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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 case study of cold air pool evolution in hilly terrain using field measurements from COLPEX

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First Published: 08 February 2019

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[Comparison of 4DVAR and EnKF State Estimates and Forecasts in the Gulf of Mexico](#)

Ganesh Gopalakrishnan, Ibrahim Hoteit, Bruce D. Cornuelle, Daniel L. Rudnick

First Published: 03 February 2019

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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 19, 2019

News

[Solar wind fills research sails at space weather center](#)

February 19, 2019 - University of Colorado Boulder

Solar wind is the stream of high energy charged particles carrying the sun's magnetic field into our solar system, where it can interact with planetary magnetic fields. There can also be large eruptions of magnetic field, known as coronal mass ejections, embedded in the solar wind that can significantly disturb the Earth's magnetic field, causing large "geomagnetic storms."

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Extreme weather can stress pregnant women—and their unborn babies

February 19, 2019 - Popular Science

New research suggests extreme weather can worsen depression in mothers, leaving children more anxious and distressed.

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The Government's New Weather Model Faces a Storm of Protest

February 19, 2019 - Wired

The government's new weather forecast model has a slight problem: It predicts that outside temperatures will be a few degrees colder than what nature delivers.

[Read MORE](#)

What's The WMO And Why Does The U.S. National Weather Service Director Want To Lead It?

February 19, 2019 - Forbes

I recently learned that the director of the U.S. National Weather Service, Dr. Louis Uccellini, is running for president of the World Meteorological Organization (WMO). Unless you are an insider within the global weather-climate community, you probably have no idea what the WMO is and why someone would want to preside over it. Here's an explanation.

[Read MORE](#)

'Tornado Alley' deaths hit a turning point in 1916

February 18, 2019 - Futurity.org

The rate of tornado-related fatalities in the “Tornado Alley” region of the United States increased faster than the rate of population growth until the start of the 20th century, according to a new study.

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Rare mega storm could overwhelm LA-area dam and flood dozens of cities, experts say

February 18, 2019 - MSN.com

Scientists call it California's "other big one," and they say it could cause three times as much damage as a major earthquake ripping along the San Andreas fault.

[Read MORE](#)

Could Scientists Use NASA’s Curiosity Rover To Repair Opportunity On Mars And Bring It Back To Life Again?

February 17, 2019 - The Inquisitr News

The final words spoken by NASA's Opportunity rover implored, 'My battery is low and it's getting dark.'

[Read MORE](#)

Atmospheric Rivers Get an Intensity Scale—Like Hurricanes

February 15, 2019 - Wired

For the last two days, a colossal, coursing stream of super-soaked subtropical air has been pummeling California with record-shattering amounts of moisture.

[Read MORE](#)

Search for Shackleton's Antarctic Shipwreck Turns Back to Avoid Deadly Ice Trap

February 14, 2019 - LiveScience

Worsening weather and nearly impenetrable sea ice have forced a research ship to abandon its search for the 1915 wreck of Ernest Shackleton's ice-bound ship Endurance in Antarctica's Weddell Sea.

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What is El Niño?

February 14, 2019 - CNN-US

The weather phenomenon called El Niño largely became a part of the public vernacular more than 20 years ago. In 1997, it caused devastating flooding in the Western United States and drought in Indonesia. It also was blamed for deadly virus outbreaks in Africa and rising coffee prices around the world.

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How NASA Tech Helps California Government and Agriculture

February 14, 2019 - Government Technology

NASA has a rich history of repurposing its technology for other uses. In California, it's helping the state government keep an eye on the snowpack in its eastern mountains and assisting the agriculture industry as well.

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Most expensive climate disasters in recent decades

February 14, 2019 - MSN.com

Climate disasters are experienced all over the world; the United States in particular has seen some incredibly damaging and dangerous storms, floods, wildfires, droughts, and heat waves over the past 39 years.

[Read MORE](#)

How far out can we forecast the weather? Scientists have a new answer

February 13, 2019 - Science

Today, the best forecasts run out to 10 days with real skill, leading meteorologists to wonder just how much further they can push useful forecasts.

[Read MORE](#)

Satellites reveal a new view of Earth's water from space

February 13, 2019 - Phys.org

In the last 30 years, hydrology has run into a sticky problem. There are simply not enough sensors for the questions hydrologists want to answer.

[Read MORE](#)

Latest weather satellite will improve forecasts for western U.S., Alaska, Hawaii

February 13, 2019 - Phys.org

Today, GOES-17, the second of the National Oceanic and Atmospheric Administration's (NOAA) next-generation geostationary weather satellites, has completed its checkout phase and is now operating in the GOES West position, providing faster, more accurate, and more detailed observations used by National Weather Service forecasters to predict Pacific storm systems, severe storms, fog, wildfires, and other environmental dangers.

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The First Interview with Trump's New Science Advisor

February 19, 2019 - Science

The new science adviser to President Donald Trump has studied the causes and effects of extreme weather for nearly 4 decades. But meteorologist Kelvin Droegemeier says he's not a climate scientist and doesn't want people to think he's an expert on the topic.

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