

New Zealand weather and climate news

These clips are courtesy of MetService library

MetService mentions

Weather: Cloud-free, warm day on the cards for most of the country

There's not a cloud in sight for most of the country.

MetService meteorologist Amy Rossiter says a scatter of cloud over Gisborne and "scrappy" high clouds in parts of the South Island are expected to clear over the course of the morning, making way for a clear day.

'Brief relief but not enough': Weekend downpours scratch surface of big dry

New Zealand Herald

Metservice meteorologist Stephen Glassey said neither Rotorua or Tauranga got more than 10mm of rain over the weekend, but "anything was ...

Rain Not Enough To Change Fire Danger

Rain over the weekend has not changed the fire danger levels across the country, warns Fire and Emergency New Zealand.

Manager Rural Fire Tim Mitchell says given how dry conditions have been, the rain experienced over the past few days has not been enough to lower the wildfire risk to the point fire restrictions can be eased.

Flash flood in Hokitika after sky 'just opened up'

Stuff.co.nz

MetService is warning rain could be heavy during Friday in the ranges of Buller and Westland north of Otira, and in the headwaters of Canterbury ...

MetService, Niwa, grilled over forecaster 'double-up'

New Zealand Herald

Niwa and MetService have faced a fresh grilling from MPs over why taxpayers are funding two weather forecasting units. MetService, a state-owned ...

MetOcean

[The recent advances of the Moana Project presented this week at the Ocean Sciences Meeting 2020](#)

This week MetOcean scientists João Souza and Julie Jakoboski are at the [Ocean Sciences Meeting 2020](#) in San Diego, CA. They will be presenting the recent advances of the [Moana Project](#) related to the New Zealand Operational Ocean Forecast System, the New Zealand Ocean Observing System and crowd-sourcing ocean data through the seafood industry with the use of the Tiro Moana sensor.

[Measuring the Hostile Ocean Beneath Hurricanes](#)

Marine Technology News

Unmanned Vehicles Collect Data for Improving Storm Forecasts ... has 50 gliders deployed worldwide that send data for ocean weather forecasting.

[Warming oceans are getting louder](#)

Posted: 18 Feb 2020 09:44 AM PST

One of the ocean's loudest creatures is smaller than you'd expect -- and will get even louder and more troublesome to humans and sea life as the ocean warms, according to new research.

Volcano alert/watch

[Small set of quakes underneath Mt Ruapehu summit area](#)

New Zealand Herald

A series of small volcanic earthquakes rumbled beneath Mt Ruapehu at the weekend. GNS Science says the larger events at the start of the quakes ...

Extreme weather (and other news) – Australia and Pacific

[Why drought-busting rain depends on the tropical oceans](#)

Recent [helpful rains](#) dampened fire grounds and gave many farmers a reason to cheer. But much of [southeast Australia remains in severe drought](#).

['Extraordinary' fires burnt at historical size, beyond climate projections](#)

Australia's bushfires were not only "extraordinary" in scale but also exposed deficiencies in the climate models that are struggling to identify changes in rainfall and fire weather trends.

'It is quite startling': 4 photos from space that show Australia before and after the recent rain

Editor's note: These before-and-after-images from several sources – NASA's Worldview application, National Map by Geoscience Australia and Digital Earth Australia – show how the Australian landscape has responded to huge rainfall on the east coast over the last month. We asked academic experts to reflect on the story they tell:

Storms break Perth's dry weather spell this week ahead of Cyclone Esther's arrival in WA

Severe thunderstorms capable of producing damaging winds, heavy rainfall and large hailstones will loom as a feature over Perth and WA's south-west for much of this week, as the state's north braces for another cyclone.

Eurocentric view of climate change failing to recognise impact in Pacific - researcher

A colonial eurocentric view of climate change is failing to recognise many of the threats and impacts in the Pacific, says a researcher.

Brisbane's grass pollen season the worst on record

Brisbane's grass pollen levels over the past two months have been up to four times higher than levels recorded anywhere in Australia since comparative records have been kept, QUT's Professor Janet Davies told a federal parliamentary inquiry this week.

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

Building a digital water management system for Thailand

Eco-Business

Building a digital water management system for Thailand ... Effective water management is crucial for both Thailand's large agricultural ... it is faster and dynamically handles weather pattern and climate change related anomalies.

Harsh Vardhan to inaugurate int'l Meet on weather, climate modelling & data (EMMDA)

Indus Dictum

Harsh Vardhan to inaugurate int'l Meet on weather, climate modelling ... and Thai Meteorological Department (TMD) of Thailand will present papers ...

One of SA's most popular weather apps is getting temperatures wrong by up to 14 degrees

Business Insider South Africa

According to a spokesperson at yr.no, the website and app use the European Centre for Medium-Range Weather Forecasts (ECMWF) calculation ...

Extreme weather (and other news) – Americas and Europe

Eastern Kentucky Has Been Underwater, but You Probably Didn't Notice

An out-of-sight, out-of-mind mentality can take hold when people lose their connection to nature.

International news and research

How Many Data Points Are Required To Forecast The Weather?

Forbes

These data points come from specialized instruments on Road Weather Information System (RWIS) stations set up along roadways, typically at major ...

Chinese weather bureau enjoys 3D printed studio

AV Magazine

Beijing Meteorological Bureau (BMB) tasked international design studio ... The vast majority of scenery was fabricated by 3D printing technology.

How are weather forecasts made?

BBC News

By Nick Miller Meteorologist, BBC Weather Centre ... Meteorologists also monitor current weather conditions to ensure the forecast is going to plan

Why is the EURO model so accurate? Mike Lyons explains

WPBF West Palm Beach

They are especially useful for forecasting big weather events, like a ... models, weather satellites and surface maps -- to come up with our forecast. And ...

Nese instructs scholars to take 90-day weather forecasts with grain of salt

Penn State News

“And they'll ask meteorologists for the weather forecast for July, in February.” Nese warned the students that any forecast past 10 days is difficult to ...

Slovakia to Establish HPC Competence Center with €3.2m Investment

HPCwire

Typical uses of HPC technology include various engineering simulations, material research, drug design, or weather forecasting. The project aims to ...

Aeolus, Measurer of the Winds

The Naked Scientists (blog)

Data gathered by Aeolus, ESA's wind-measuring satellite, is being incorporated into weather-forecasting models for the first time. “It's been known for a ...

The ethereal art of fog-catching

In chronically dry regions around the world, communities are finding ways to live from the water suspended in the air - creating valuable drinking water from mist.

Scientists are using nuclear weapons surveillance tech to 'hear' tornadoes

Washington Post

Technology developed to detect nuclear weapons detonations from afar might help meteorologists track tornadoes. A team of scientists are hoping to ...

Valentia Island key in birth of modern weather forecasting

Independent.ie

"The Valentia Observatory meteorological record remains one of the ... They described how meteorologists doggedly kept working during Civil War ...

The smell of rain, petrichor, inspired a Paul Kelly song and has the perfume industry sniffing around

With large swathes of Australia receiving their first drenching in months, the distinct smell of rain is in the air.

Jet stream not getting 'wavier' despite Arctic warming

Rapid Arctic warming has not led to a 'wavier' jet stream around the mid-latitudes in recent decades, pioneering new research has shown.

US Will Triple Weather Computing Capacity - Is It Enough To Surpass The European Model?

Forbes

Another point that goes overlooked is that the U.S. federal weather enterprise has to leverage its budget in many directions: new satellites, radars, ...

'Atmospheric rivers' over Atlantic blamed for extreme UK flooding

Financial Times

Atmospheric rivers were first defined by the American Meteorological Society in 2017. Since then Prof Ralph, working with other US weather experts, ...

General Dynamics takes out incumbent for \$505M NOAA weather computer contract

Washington Technology

... and Atmospheric Administration to create weather forecasting models. ... A Federal Procurement Data System filing says the CSRA bid was chosen ...

Air Quality

Motueka air pollution 'regularly exceeds' World Health Organisation guidelines

Fine pollutants in the air above Motueka last winter were, at times, nearly four times over the World Health Organisation guideline, a study has found.

Aviation

New space weather advisories serve aviation

Phys.Org

A new international advisory system is working to keep aircraft crew and passengers safe from space weather impacts, thanks in part to the efforts of a ...

Drier, wetter, stormier: How Air NZ passenger planes will track climate change

Passenger planes traversing New Zealand skies will soon be ferrying climate information, as well as people.

Coronavirus could cut Air New Zealand earnings by \$35m-75m

The coronavirus outbreak is set to cost Air New Zealand as much as \$75 million, as it moved to cut more flights to lessen the impact.

Laudamotion A320 Suffers Multiple Lightning Strikes On Approach

Simple Flying

Alongside lightning damage, the aircraft's weather radar was knocked out of action ... But the Irish Aviation giant only acquired its controlling stake in ...

How Drones Aid in Weather Forecasting

CIO Applications

Currently, meteorologists are using radar, satellites, mobile measurements, and weather balloons to surround storms and capture as much data as ...

Business/Insurance

Economists predicting flat March quarter amid Covid-19 and drought

Economists are predicting a flat - or slightly down - March quarter, as the effects of the Covid-19 coronavirus and the drought come to a head.

Coronavirus: Is NZ ready for a worst-case economic scenario?

Hundreds of North Island forestry workers could be relocated to conservation jobs in Southland to soften the economic impact of the Covid-19 outbreak.

Storm Dennis damage could cost insurance companies £225m

The Guardian

The severe weather brought heavy rain and strong winds to England and Wales, which led to record high river levels and flooded hundreds of ...

Coronavirus

Coronavirus: World 'not ready' for a pandemic, WHO says

The World Health Organisation has warned that the world is not ready for a potential coronavirus pandemic.

Energy and Mining

Quadrupling turbines, US can meet 2030 wind-energy goals

The United States could generate 20% of its electricity from wind within 10 years, without requiring any additional land, according to new research.

Power play: Trends and risks in the energy sector

New Zealand's energy sector underwent great scrutiny as part of the 13-month Electricity Price Review, but the government may yet establish a backstop regulatory power to override the Electricity Industry.

Better long-term forecasts can help the transition to renewable energy

Tech Xplore

Power demand is also highly dependent on the weather and tends to increase when the weather is cold, and people turn on their electric heaters.

The climate and increased extreme weather affect our energy systems

Climate change, with more and more storms and heat waves, also has consequences for our energy supply. An international research team has now developed a new method for calculating how extreme weather affects energy systems.

Government (regional and national)

Extreme weather conditions can tax urban drainage systems to the max

During a typical Canadian winter, snow accumulation and melt -- combined with sudden rainfalls -- can lead to bottlenecks in storm drains that can cause flooding. With that in mind,

researchers have been examining urban stormwater drainage systems, and they too have concerns about the resilience of many urban drainage systems.

Health

To Predict Flu's Spread, Modelers Turn to Weather Forecasts

University of Virginia

And could weather forecasting help predict where and when the flu will ... “But we're streamlining our data pipeline and improving our techniques, with ...

Every child's future under threat from climate change and poor health, major report warns

Climate change and harmful marketing are jeopardising the future of every child around the world — and Australia is failing to create an environment fit for future generations.

Water

Auditor-General: NZ not managing water well enough

Our authorities must do better in managing New Zealand's precious water resources, a new report from the Auditor-General has found.

The city that soaks up water - can Auckland cope?

Auckland's water use has gone through the roof this summer, breaking records of 560 million litres per day. This when there's been little to no rain, the city breaking historic records for dry patches.

Innovation and technologies and AI

Deep learning accurately forecasts heat waves, cold spells

Posted: 04 Feb 2020 08:25 AM PST

Using an advanced form of deep learning, researchers created a computer system that learned how to accurately predict extreme weather events, like heat waves, up to five days in advance using minimal information about current weather conditions. Ironically, the self-learning 'capsule

neural network' uses a method reminiscent of 'analog' weather forecasting, which was made obsolete by computers in the 1950s.

Should you tell customers they're talking to AI?

When chatbots reach the level of always passing the Turing Test, and can flawlessly pass for human with every interaction, do you disclose to users that it's AI? That's the dilemma.

Snowflake Software Agrees to Join Cirium in a Deal Focused on Delivering a Complete, Real-time ...

Yahoo Finance

Based in Southampton, UK, Snowflake has accelerated the integration and exchange of flight, weather and aeronautical data through its cloud-based ...

Climate change / global warming / sea level rise

NZ's big dry and climate change: What's the link?

Amid one of the biggest dry spells in New Zealand history, many people have been asking whether we're seeing climate change in action.

Cloud seeding / Geoengineering

Let it snow: Quantifiable observation of cloud seeding

Scientists found that cloud seeding in the Idaho mountains produced a total of about 235 Olympic-sized swimming pools' worth of water.

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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.

Eastern Kentucky Has Been Underwater, but You Probably Didn't Notice

The Atlantic - February 23, 2020

A study released in late 2018 by the American Meteorological Society showed that record wet and dry spells are occurring around the world, and that the events are connected to climate change.

Scientists are using nuclear weapons surveillance tech to 'hear' tornadoes

Washington Post - February 23, 2020

Technology built for bomb tests could help confirm tornado touchdowns.

Deployment and Operation of the RAAVEN small Unmanned Aerial System (sUAS) in Support of NOAA Science during ATOMIC

NOAA - January 27, 2020

This project, dubbed the Atlantic Tradewind Ocean–Atmosphere Mesoscale Interaction Campaign (ATOMIC), is designed to investigate the structure and dynamics of shallow convection and the exchanges of energy between the clouds, the ABL, and the underlying ocean using a variety of different observational capabilities.

Top 10 U.S. Record-Breaking Extreme Weather Events of the Decade

U.S. News & World Report - February 18, 2020

Hurricanes Harvey and Sandy lead the list.

Seen From Space: Black Smoke From Becker Fire Captured By Weather Satellite

CBS Minnesota - February 21, 2020

The plume of black, toxic smoke that filled the sky north of the Twin Cities for days this week was so massive that it was captured by a U.S. weather satellite.

First Satellite in Global Air Quality Constellation Launches

WeatherNation - February 24, 2020

South Korea's Geostationary Environment Monitoring Spectrometer (GEMS) instrument on the Korean Aerospace Research Institute GEO-KOMPSAT-2B satellite recently launched into orbit aboard an Arianespace Ariane 5 rocket Tuesday, Feb. 18, from the Guiana Space Center in French Guiana.

NOAA warns of risks from relying on aging space weather missions

SpaceNews - February 19, 2020

The head of NOAA's space weather office used a recent hearing to caution that a failure of an aging spacecraft in the next few years could leave the agency "hurting a little bit" in its ability to monitor solar activity.

U.S. Will Triple Weather Computing Capacity - Is It Enough To Surpass The European Model?

Forbes - February 21, 2020

Is the American weather model poised to surpass the European model (and does that even matter)?

New space weather advisories serve aviation

Phys.org - February 18, 2020

A new international advisory system is working to keep aircraft crew and passengers safe from space weather impacts, thanks in part to the efforts of a team of CIRES and NOAA developers, forecasters, and scientists in Boulder, Colorado.

NASA Images Show Dramatic Melting During Antarctica Heat Wave

The Weather Channel - February 21, 2020

Twenty percent of the snow on one ice cap in Antarctica melted during a recent heat wave, and satellite images captured the dramatic before and after effects.

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John Maunder's WEATHEREYE

<https://www.sunlive.co.nz/blogs/14404-tropospheric-temperatures-1979-to-january-2020.html>

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Thanks to our regular suppliers

Bob McDavitt

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