

New Zealand weather and climate news

Courtesy of MetService

MetService mentions

Tornados strike Hamilton and Tauranga

Once the tornado blew out, it rained for two minutes, then everything went still, Barlow said.

MetService forecaster Cameron Coutts said it looked like a tornado.

It was hard to say how big it was, he said.

<https://www.stuff.co.nz/waikato-times/news/108187888/funnel-cloud-touches-down-in-rural-waikato>

Fine weather for most ahead of windy and wet weather later in the week

MetService meteorologist Brian Mercer said it would be a nice day in Rotorua, and warm - up to 18C.

https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12151771

Snow, more wild weather on way

MetService has issued road snowfall warnings for the Crown Range Road and the Lindis Pass (State Highway 8), saying a cold front expected to move through this afternoon could bring snow to the roads this evening from about 8pm.

<https://www.odt.co.nz/regions/snow-more-wild-weather-way>

Top mountain guide killed in Aoraki avalanche

Praise has been flooding in for the two mountain guides who were killed in an avalanche on Mount Hicks in Aoraki Mt Cook National park on Wednesday. Wolfgang Maier and Martin Hess died while returning from the summit early on Wednesday morning. Their climbing partner, philanthropist and adventurer Jo Morgan, was also buried but managed to dig her way out and raise the alarm. Until the tragedy, Mrs Morgan was on track to become the first New Zealand grandmother to climb all peaks over 3000m in the country. Area Commander Inspector Dave Gaskin says police will be conducting a full investigation, interviewing everyone involved before referring the case to the coroner. He told reporter Conan Young there was high risk of avalanche in the area at the time.

<https://www.radionz.co.nz/national/programmes/morningreport/audio/2018669272/top-mountain-guide-killed-in-aoraki-avalanche>

Avalanche risk 'considerable'

Two mountain guides were swept to their deaths by an avalanche in an area of Aoraki-Mt Cook National Park under a "dangerous avalanche conditions" warning.

<https://www.odt.co.nz/news/national/avalanche-risk-considerable>

Pushing back Masterton's flood projections expected to save ratepayers millions

Large parts of Masterton have been shown to be safe from inundation after a long battle to correct flood modelling.

Models released in 2014 predicted a one-in-a-hundred-year flood of the Waipoua River would leave swathes of the town underwater with protection measures estimated to cost at least \$10 million.

<https://www.stuff.co.nz/environment/108218442/pushing-back-mastertons-flood-projections-expected-to-save-ratepayers-millions>

Volcano alert

Ruapehu early warning alarm essential - volcanologist

A volcanologist says the early-warning system on Mount Ruapehi is essential. Ruapehu Alpine Lifts, which runs Whakapapa and Turoa ski fields, is locked in negotiations with the Department of Conservation over who should pay for the eruption warning system. That system is one of five in the volcanic alarm network for Tongariro National Park. Department of Conservation volcanology adviser Dr Harry Keys told RNZ reporter Matthew Theunissen the system remains active, and funding will be found one way or another. But, he says there's a danger that some people have forgotten the past.

<https://www.radionz.co.nz/national/programmes/morningreport/audio/2018669260/ruapehu-early-warning-alarm-essential-volcanologist>

MetOcean

Increasing frequency of ocean storms could alter kelp forest ecosystems

A future with stormier seas may bring strong changes to the biodiversity of coastal sea life, according to new research.

<https://www.sciencedaily.com/releases/2018/10/181030091427.htm>

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

Explainer: what any country can and can't do in Antarctica, in the name of science

Antarctica is owned by no one, but there are plenty of countries interested in this frozen island continent at the bottom of the Earth.

[Read more here](#)

Extreme weather (and other news) – Australia and Pacific

Heatwatch: extreme heat in the Sunshine Coast

The combination of projected rises in extreme heat as a result of global warming and the high levels of humidity in the Sunshine Coast present a serious risk to the health and wellbeing of the region's population.

The Sunshine Coast has historically experienced a relatively pleasant climate with only around two to four days over 35 degrees per year. However, the amount of these extreme heat days could increase nearly tenfold up to a projected 32 days over 35 by 2090.

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 agencies.

Over the last year there were 94 days - concentrated in summer - with a relative humidity of 70% or above and 44 days over 80% or above at 3pm in the Sunshine Coast Combined with 70% humidity, conditions over 35 degrees are considered "dangerous" by government agencies such as the US Government National Oceanic and Atmospheric Administration. Temperatures of 35 degrees combined with 80% humidity is considered "extremely dangerous".

Alarming, CSIRO and Bureau of Meteorology (BoM) projections show that unless emissions are decisively reduced, well over half of summer nights could be over 25 degrees by 2090 in the Sunshine Coast from an average of just one summer night over 25 now. Nights where the minimum temperature does not fall below 25 degrees are considered an extreme temperature threshold and can have serious health impacts.

http://www.tai.org.au/sites/default/files/P631%20Sunshine%20Coast%20Heatwatch%20%5BWEB%5D_0.pdf

Bit of a shock': Coming heat to dry off much of October's wet spell

Sydney's wettest October in nine years helped ease fire conditions but the coming surge in heat will sap much of those gains in vegetation moisture, the Rural Fire Service and meteorologists say

<https://www.smh.com.au/environment/weather/bit-of-a-shock-coming-heat-to-dry-off-much-of-october-s-wet-spell-20181031-p50d3g.html>

Early season records set to tumble as hot air mass looms from the north

Parts of Victoria, South Australia and New South Wales are set to swelter through record-breaking temperatures this week, according to the Bureau of Meteorology.

<https://www.abc.net.au/news/2018-10-31/hot-start-to-november-as-early-season-records-set-to-tumble/10448782>

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

Accuweather's Asia winter forecast for the 2018-2019 season

An active storm track will bring several opportunities for rain and mountain snow to the Middle East, as well as parts of China and Japan during the winter of 2018-2019.

<https://www.accuweather.com/en/weather-news/accuweathers-asia-winter-forecast-for-the-2018-2019-season/70006368>

Hot Temperature Has Highest Mortality Risk, But Moderately Cold Temperature Contributed To The Most Deaths In India

Extreme temperatures, including cold spells and heat waves, have detrimental effects on human health. Most climate change projections foresee extreme weather becoming more prevalent. Indeed, various parts of the world have already begun to experience the impact of extremely hot weather. Much less attention has been given to the health effects of cold temperature ranges.

<https://sciencetrends.com/hot-temperature-has-highest-mortality-risk-but-moderately-cold-temperature-contributed-to-the-most-deaths-in-india/>

Extreme weather (and other news) – Americas and Europe

11 dead in Italy storms as wild weather sweeps Europe

ROME: The death toll from fierce storms battering Italy has risen to 11, civil protection authorities said on Tuesday (Oct 30), as wild weather swept parts of Europe, leaving motorists

and tourists stranded.

Read more at <https://www.channelnewsasia.com/news/world/11-dead-in-italy-storms-as-wild-weather-sweeps-europe-10879500>

Photos: Early week flooding leaves 70 percent of Venice underwater, more flooding possible Thursday

More than 70 percent of Venice, Italy, was under water after strong winds flooded the area by raising the water level by more than 5 feet earlier this week.

<https://www.accuweather.com/en/weather-news/photos-venice-italy-inundated-by-high-tide-causing-widespread-flooding/70006490>

International news and research

Work of Met Office forecasters at Heathrow wins award.

The support the Met Office provided Heathrow Airport during the 2017/18 winter has been recognised with a prestigious award.

<https://www.metoffice.gov.uk/news/releases/2018/heathrow-award>

Pride of Britain award for Meteorologist

This summer, Met Office meteorologist Josh Bratchley was part of a team of specialist divers involved in the rescue of 13 young people trapped in a cave in Thailand.

<https://www.metoffice.gov.uk/news/releases/2018/pride-of-britain>

Precipitation Record Helps Forecasting Flooding Events

[NOAA] A new precipitation Climate Data Record (CDR) adds greater capabilities for better decision-making concerning severe precipitation and hydrological events.

<http://www.weathernationtv.com/news/precipitation-record-helps-forecasting-flooding-events/>

Successful mega-update of MultiModel MOS delivers better forecasts

To ensure we remain one of the best weather companies in the world, improving the quality of our forecasts has constantly been at the top of our to-do list. We recently took another huge leap in that area with a large-scale update of our MultiModel MOS. “It was a very exciting process; we do not undertake such a complicated step towards improvement very often,” says Marco Bergehege, meteorological services analyst at MeteoGroup. For the past six months, the

Meteorological Services Team has been working on the implementation of this complex MOS update. Their goal: to ensure that the automatic forecasts issued by thousands of weather stations will continue to perform excellently in the next few years.

<https://www.meteogroup.com/blog/successful-mega-update-multimodel-mos-delivers-better-forecasts>

Weatherwatch: forecasts may suffer if satellites share bandwidth

Frequency sharing could jam airways, lowering accuracy of forecasts, meteorologist warns

<https://www.theguardian.com/science/2018/oct/29/weatherwatch-forecasts-may-suffer-if-satellites-share-bandwidth>

ECMWF

New interpolation package MIR is ready for operations

It has taken nearly four years to develop and test ECMWF's new Meteorological Interpolation and Regridding (MIR) software package. Now its main developer, Pedro Maciel, is happy to certify that it is ready for operations.

Pedro joined ECMWF's Development Section in January 2015 and has been working on MIR ever since. At the same time, he has also improved the interpolation software used at ECMWF until now, which is part of the EMOSLIB package.

<https://www.ecmwf.int/en/about/media-centre/news/2018/new-interpolation-package-mir-ready-operations>

WMO

Conference on Air Pollution and Health seeks greater action

The World Meteorological Organization is one of the co-organizers of the World Health Organization's first [Global Conference on Air Pollution and Health](#). The conference seeks to increase commitments from governments, health authorities, international organizations and the scientific community to act against this serious health threat.

[Read more here](#)

Business

CustomWeather Continues to Lead in Weather Innovation With New and Expanded Weather Products Including eTo, Hail and Fire Data

SAN FRANCISCO--(BUSINESS WIRE)--CustomWeather, Inc., a premier, specialized provider of high-resolution weather data and alert services, has released several new products to support the weather data needs of its clients worldwide. Of the numerous additions, three key additions to note are:

<https://www.businesswire.com/news/home/20181029005017/en/CustomWeather-Continues-Lead-Weather-Innovation-New-Expanded>

CAA organises workshop on meteorology, crisis management

The Civil Aviation Authority, represented by the Meteorological Department, on Monday organised a workshop entitled 'Meteorology, crisis and disaster management'.

<https://www.gulf-times.com/story/611175/CAA-organises-workshop-on-meteorology-crisis-manag>

Satellites and radar

Video: Preparing MetOp-C

The third in the series of MetOp satellites is scheduled for launch on 7 November from Europe's spaceport in Kourou. In this special edition of Earth from Space, ESA's MetOp-C project manager, Stéphane Carlier, talks about this latest polar-orbiting weather satellite and how its range of instruments provide data on a host of atmospheric variables such as temperature and humidity. These data are used largely for numerical weather prediction – the basis for weather forecasting. They also contribute to climate research.

Read more at: <https://phys.org/news/2018-10-video-metop-c.html#iCp>

Citizen science / crowd sourcing

Kiwis asked to help unlock century-old weather secrets

Kiwis are being called upon to help piece together more than a century of weather records – including those recorded by members of Captain Robert Scott's doomed trip to the South Pole in 1912.

https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12151407

Climate change / global warming / sea level rise

Climate change factor in climbing

Climate change has become a factor in climbers' decisions about when to venture into the Southern Alps.

While climbing in spring risks avalanches, climate change is - more frequently than in the past - presenting another obstacle for climbers who wait for summer.

<https://www.odt.co.nz/regions/wanaka/climate-change-factor-climbing>

Journal and articles online

Water and atmosphere.er & Atmosphere (NIWA)
Water & Atmosphere 21, October 2018

The October 2018 edition of NIWA's flagship publication, Water & Atmosphere.

[Kaikōura earthquake provides world-first insight into submarine canyons](#)

[Shark survival tale](#)

[A say on the sea shore](#)

[Reducing sedimentation](#)

[Fieldays - farming for the future](#)

<https://www.niwa.co.nz/publications/wa/water-atmosphere-21-october-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](#).

News

October 30, 2018

Understanding the Meteorology of a Fly Ball May Help Baseball Teams

October 30, 2018 - Forbes

As an atmospheric scientist, I thought it would be interesting to explore the meteorology of actual baseballs in flight and the innovative capabilities of a new company called Weather Applied Metrics.

[Read MORE](#)

[Three-Quarters of Venice Underwater as City Hit by Worst Flooding in a Decade](#)

October 30, 2018 - CBS News

Three-quarters of the lagoon city of Venice was under water Monday as large swathes of Italy continued to be battered by severe storms.

[Read MORE](#)

[Carolinas still reeling from Florence six weeks after storm](#)

October 30, 2018 - UPI.com

approaching Hurricane Florence on Thursday in Wilmington, N.C. Photo by Ken Cedeno/UPI | License Photo A sign shows that a Hurricane warning

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[Typhoon Yutu: Latest Path and Forecast as Storm Hits Philippines, Heads for China](#)

October 30, 2018 - Newsweek

S. territory, The Associated Press reported. The storm was also “one of the most intense storms” on record for the entire globe, atmospheric

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[More Than 90% of World’s Children Breathe Polluted Air, World Health Organization Reports](#)

October 29, 2018 - KTLA 5

to a report by the country’s System of Air Quality and Weather Forecasting and Research (SAFAR). The authorities have tried to reduce crop

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Earth's carbon dioxide levels are likely the highest they've been in 15 million years

October 29, 2018 - Yahoo! News

warming ocean temperatures provide extra energy to tropical storms," climate scientist Stefan Rahmstorf, head of Earth System Analysis at

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An Aquatic Drone Is New England's First Line of Hurricane Defense

October 29, 2018 - Government Technology

the glider project is ready to start making a bigger impact on hurricane forecasting. "The difference between gliders and not gliders, it's

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Top weather phobias explored: Millions of Americans experience these weather fears

October 29, 2018 - MSN.com

safe." According to a 2014 study published in the American Meteorological Society Journal, approximately one in 10 Americans may suffer from

[Read MORE](#)

Hurricane Michael Was the Most Devastating Disaster Florida's Farmers Have Seen in Decades

October 29, 2018 - Pacific Standard

Kemerait, plant pathologist at the University of Georgia. Several recent, intense storms have the region's hard-hit farmers thinking, "

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[A \\$48 million submarine will dive to the deepest point in the ocean, where only 3 people have been before](#)

October 29, 2018 - Connecticut Post

sea — here are the most terrifying ones we know about See Also: An intense storm has wiped out a remote Hawaiian island, and it's a sign

[Read MORE](#)

[How the Greenland ice sheet fared in 2018](#)

October 29, 2018 - Phys.org

SMB can be high and is highly dependent on the weather. But what about the total mass budget – that also accounts for mass loss via calving

[Read MORE](#)

[Leaf peeping' is big business in New England, but climate change is moving the calendar](#)

October 27, 2018 - Pittsburgh Post-Gazette

. Biologists are tracking this through manual observation, meteorological stations, satellite imagery, and a network of digital cameras, the

[Read MORE](#)

[Remote Hawaiian island wiped out by powerful hurricane](#)

October 26, 2018 - StarTribune.com

East Island was decimated by Hurricane Walaka — one of the most intense storms ever recorded in the Pacific Ocean — and effectively wiped

[Read MORE](#)

[WMO Reactive Gases Bulletin highlights ozone pollution](#)

October 26, 2018 - World Meteorological Organization

Air quality regulations and anti-pollution measures in Europe and North America have had very positive impacts on air quality. Since the year 2000, both average and peak surface ozone concentrations have levelled off and even started to fall at some locations after increasing throughout the

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[Where Emergency Readiness Is a Major](#)

October 26, 2018 - US News & World Report

don't have professionals helping in emergency preparedness. You looked at what happened with Hurricane Sandy, and the governor recognized we

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[How Does Cold Weather Affect Your Heart Attack Risk?](#)

October 26, 2018 - MSN.com

risk. Said to be the largest of its kind, the research looked at 15 years of weather data and the incidence of heart attacks in Sweden over

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[Five Category 4+ tropical cyclones have struck U.S. soil in 14 months. This is probably without precedent.](#)

October 25, 2018 - MSN.com

© Cooperative Institute for Meteorological Satellite Studies/ (Cooperative Institute for Meteorological Satellite Studies adapted by Ian

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Hazardous space junk is piling up. Can this satellite help?

October 25, 2018 - PBS NewsHour

demonstrated a missile by destroying one of its own defunct weather satellites. The event created nearly 1,000 trackable debris fragments,

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El Nino could bring drought relief to southwestern US

October 24, 2018 - KXAN.com

central Pacific Ocean that influences weather worldwide, said Gerry Bell, research meteorologist with the National Weather Service's Climate

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Atmospheric scientists begin field campaign to study extreme thunderstorms in Argentina

October 24, 2018 - EurekAlert!

; and vehicles with instruments that capture small-scale weather patterns. Research aircraft will observe conditions aloft in the storms'

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NOAA is about to make some big changes to its global weather model

October 24, 2018 - Ars Technica

to all of our users," Gross said. For some people, that means hurricane forecasts. For others, that's winter storm warnings. And for others

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Japan launches satellite to study human causes of climate change

October 29, 2018 - Spaceflight Now

accuracy. To combat global warming with satellites' observational data, we must use meteorological data and model simulations to estimate

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