

New Zealand weather and climate news

Clips below are courtesy of MetService Library

MetService

Hawke's Bay could hit 30C; Pouring rain, 150kmh winds batter other areas

The heavy rain event reached the South Island overnight and would last through much of the next two days, MetService meteorologist Angus Hines said.

<https://www.stuff.co.nz/national/108438126/hawkes-bay-could-hit-30c-pouring-rain-150kmh-winds-batter-other-areas>

Spring scorcher on the cards as warmer weather arrives

Although rain is expected later today for parts of the South Island and tomorrow in the North Island.

But MetService meteorologist Philippa Murdoch says before the rain arrives, it will be humid.

<https://www.newsie.co.nz/news/125109-spring-scorcher-on-cards-as-warmer-weather-arrives.html>

Dunedin set to swelter then shiver

MetService meteorologist Tom Adams said a "good recipe" for hot temperatures was developing.

<https://www.odt.co.nz/regions/dunedin-set-swelter-then-shiver>

Rain, possible flooding, on way for South

MetService meteorologist Tui McInnes said a heavy rain warning was in place for the western and southern parts of the South Island and the headwaters of Otago lakes and rivers.

<https://www.odt.co.nz/news/dunedin/rain-possible-flooding-way-south>

West Coast locals prepare for heavy rain and possible flooding

Civil Defence is monitoring the weather as MetService says an active front will bring heavy rain to parts of central and southern New Zealand.

<https://www.radionz.co.nz/news/national/375431/west-coast-locals-prepare-for-heavy-rain-and-possible-flooding>

Heavy rain warnings as front approaches

The MetService is warning residents across much of the South Island to expect significant rain tomorrow, saying flooding is likely in places.

<https://www.odt.co.nz/regions/heavy-rain-warnings-front-approaches>

MetOcean

Startling new research finds large buildup of heat in the oceans, suggesting a faster rate of global warming

The findings mean the world might have less time to curb carbon emissions.

[Read more here](#)

A changing climate necessitates rethinking tropical marine conservation, researchers say

In a new article, researchers are calling for a rethink on tropical marine conservation efforts, as people who previously relied on coral reefs for food and income are increasingly looking to alternative habitats which is putting pressure on the animals that inhabit seagrass meadows.

<https://www.sciencedaily.com/releases/2018/11/181106104218.htm>

New technologies in the ocean energy sector

While the ocean energy sector is still at an early stage of development, a new report analyses ten future emerging technologies to generate energy from the ocean tides and waves.

<https://www.sciencedaily.com/releases/2018/10/181030174952.htm>

NIWA

Blenheim within striking distance as sunshine race heats up with its neighbour

As the finish line approaches, this year's sunshine race is again a battle for top of the south bragging rights.

<https://www.stuff.co.nz/national/108311740/Blenheim-within-striking-distance-as-sunshine-race-heats-up-with-its-neighbour>

Powerful new supercomputer ready to provide glimpse into NZ's climate future

If you're going to tackle the big questions surrounding climate change, you're going need a big computer to provide the answers.

Fortunately, the National Institute for Water and Atmospheric Research (Niwa) now has one of the biggest in the country.

<https://www.stuff.co.nz/technology/108396474/powerful-new-supercomputer-ready-to-provide-glimpse-into-nzs-climate-future>

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

Philippines to take action if Chinese weather stations in South China Sea are verified — Palace

Metro Manila (CNN Philippines, November 6) — Malacañang said it will await confirmation on reports that China has set up weather stations on areas in the South China Sea and assured that the government will take action if this is proven true.

<http://cnnphilippines.com/news/2018/11/06/ph-china-south-china-sea-panelo.html>

Extreme weather (and other news) – Americas and Europe

Italian storms claim 17th life, and 14 million trees

MILAN: Heavy rain and gales devastating parts of Italy have claimed two more lives, taking the overall death toll to at least 17, and laid waste to vast swathes of forest.

<https://timesofindia.indiatimes.com/world/europe/italian-storms-claim-17th-life-and-14-million-trees/articleshow/66494812.cms>

International news and research

Hard rain vs soft rain: What differentiates drizzle from a downpour?

It is raining again in the south-east and it is seeping into discussion. So if you would like to intrigue your friends, fascinate your family and enthral your co-workers with the science behind "soft" and "hard" rain, read on.

[Read more here](#)

The US next housing crash could be caused by weather, not Wall Street – here are the places that should be worried

Around 300,000 coastal homes in the US could experience chronic flooding by 2045, placing \$US117.5 billion worth of residential property at risk.

Despite this threat, real estate professionals in vulnerable areas say there's still a premium on coastal homes.

While rebuilding homes to withstand hurricanes or floods is an expensive undertaking, it could save entire communities from devastation.

<https://www.businessinsider.com.au/housing-hurricanes-floods-weather-building-2018-10?r=UK&IR=T>

New technology will change how meteorologists predict severe weather

It's called "Probabilistic Hazards Information" and Paul Heggen will explain what exactly that means.

https://www.cbs17.com/news/local-news/new-technology-will-change-how-meteorologists-predict-severe-weather_20181105120925/1573755789

Ozone layer is healing, but maybe not the Arctic ozone hole, UN says

Report cites unexpected increases in ozone-depleting CFC-11 from eastern Asia since 2012

<https://www.cbc.ca/news/technology/ozone-healing-1.4794803?cmp=rss>

WMO

Pan-Arctic climate outlook forum forecasts above average winter temperatures

The second session of the Pan-Arctic Climate Outlook Forum (PARCOF) was held virtually on 30 October 2018 to review the climate conditions during the previous summer season, and to provide an outlook for the forthcoming winter season.

[Read more here](#)

India Meteorological Department: End of Season Report for the 2018 Southwest Monsoon

The season (June-September) rainfall over the country as a whole was 91% of its long period average (LPA). Seasonal rainfalls over Northwest India, Central India, South Peninsula and Northeast (NE) India were 98%, 93%, 98% and 76% of respective LPA.

[Read more here](#)

Montreal Protocol assessment reveals healing ozone, untapped potential for climate action

Quito, 5 November 2018 –The latest [Scientific Assessment of Ozone Depletion](#) reveals a healing ozone layer, global warming reduction potential, and options for more ambitious climate action.

[Read more here](#)

Extreme weather reveals changing climate

A new report by the Met Office, published today, reveals further details about changes in the UK's climate since the 1960s.

[Read more here](#)

Aviation

Coding Updated for Reporting Snow Pellets, Small Hail

The FAA has published [Information for Operators 18011](#) to explain updated codes that will soon be used for indicating snow pellets and small hail in terminal area weather reports (Metars).

<https://www.ainonline.com/aviation-news/business-aviation/2018-11-06/coding-updated-reporting-snow-pellets-small-hail>

Clouds

Fluctus: How big waves form and break in the clouds just like they do in the ocean

The name makes it sound like something best avoided, but fluctus — or Kelvin-Helmholtz instabilities — are amazing atmospheric formations that mimic breaking ocean waves.

<https://www.abc.net.au/news/2018-11-06/pilots-can-ride-alongside-breakers-in-the-atmosphere/10469280>

Lightning

Lightning Strike Sets Yacht Ablaze in Thailand; Nine British Tourists Rescued

Nine British tourists were rescued from a burning yacht after lightning struck the ship during a storm off Phuket, Thailand.

<https://weather.com/news/news/2018-11-04-nine-british-tourists-yacht-lightning/>

Satellites and radar

Metop-C satellite launch gives Met Office another set of 'eyes in the sky'

Today's launch of the newest EUMETSAT weather satellite continues the development of a programme which gives the UK's Met Office access to world-leading weather data from polar orbit. The Metop-C satellite was launched from the European Space Port in Kourou, French Guiana. It completes a network of three platforms flying in a polar orbit at an altitude of 817km, which enables global observations of weather and atmospheric composition, and monitoring of ocean and land surfaces.

<https://www.metoffice.gov.uk/news/releases/2018/metop-c-satellite-launch-gives-met-office-more-eyes-in-the-sky>

Climate change / global warming / sea level rise

Climate change is an economic problem. Let's fix it

Big international banks need to fund action on climate change, to protect stability and security around the world

<http://news.trust.org/item/20181031101018-qfezy/>

Review finds New Zealand a world leader in climate change

A government research programme has positioned New Zealand as a world-leader in research into mitigating greenhouse gases from agriculture and adapting to climate change, a recent independent review has found.

<http://www.scoop.co.nz/stories/SC1811/S00013/review-finds-new-zealand-a-world-leader-in-climate-change.htm>

Emergency preparedness / disaster planning / resilience

Millions are left behind in an emergency – how do we reach them?

Local people are key in helping aid workers access remote, war-torn or unmapped crisis zones

<http://news.trust.org/item/20181031090712-wkig4/>

Journal and articles online

The October 2018 edition of the **CMOS Bulletin** is available / L'édition octobre 2018 Bulletin SCMO est disponible

<http://bulletin.cmos.ca/cmos-bulletin-scmo-vol-46-no-5-october-2018/>

<http://bulletin.scmo.ca/bulletin-scmo-volume-46-numero-5-octobre-2018/>

Sub-synoptic-scale features associated with extreme surface gusts during the South Australia Storm of September 2016 – Part I: characteristics of the event

Nick Earl, Ian Simmonds, Irina Rudeva

Version of Record online: 01 November 2018

Shapiro–Keyser conceptual model of the life cycle of an extratropical cyclone: (I) open wave, (II) frontal fracture, (III) bent-back front and frontal T-bone, and (IV) mature, frontal occlusion (adapted for the Southern Hemisphere). The cold and warm conveyor belts (CCB and WCB respectively) are marked, along with the low-pressure centre (L) and the cloud signature (stippled areas; adapted from Baker, 2009).

Book review

Sylvia Knight

Version of Record online: 01 November 2018

A study of freezing precipitation in Devon

Keith Fenwick

Version of Record online: 01 November 2018

Cross section of solid precipitation that fell on Thursday 1 March into Friday 2 March in Uffculme, Devon.

Severe weather and snow conditions on Cairngorm summit in February to March 2018

Mike Kendon, Mark Diggins

Version of Record online: 01 November 2018

Instruments on Cairngorm summit, showing ultrasonic anemometers, whip and screen-mounted thermistors and humidity sensors in housing tubes.

Exploiting wind profiler information

Alan Hisscott

Version of Record online: 01 November 2018

Time-height wind profiler plot from Meary Veg, Isle of Man, illustrating the warm frontal surface (WFS), the upper cold front (UCF) and surface cold front (SCF) features of a 'split cold front' which passed over the instrument on 3 October 2007. (Note that the features are left-right reversed when compared with a conventional distance-height diagram.)

The relationships between precipitation amounts, number of rain days, and relative vorticity in the mid-troposphere over Iran

Mohamad Darand, Nabi Mirzaei

Version of Record online: 01 November 2018

The spatial position of grids of dataset (Era-Interim) with the spatial resolution of 0.125 over Iran.

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.

Forms of the thermodynamic energy equation for moist air

Andrew Staniforth, Andy White

First Published: 30 October 2018

The energy cascade associated with daily variability of the North Atlantic Oscillation

J. M. Castanheira, C. A. F. Marques

First Published: 30 October 2018

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Paul M. Markowski, Timothy P. Hatlee, and Yvette P. Richardson

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CORRIGENDUM

Corrigendum

Rae-Seol Park, Jung-Hyo Chae, and Song-You Hong

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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](#).

Hurricanes and water wars threaten the Gulf Coast's new high-end oyster industry

November 6, 2018 - [Phys.org](#)

eliminate it. The threat of rising sea levels and more intense storms will force them to continue adapting and improving their strategies.

[Read MORE](#)

Fog Study Sets Sights on Climate Change

November 6, 2018 - Half Moon Bay Review

With wispy tendrils that shroud the marshes in Pescadero, the shores of Montara and everything in between, fog is one of the Coastside's defining characteristics. But could the regular clouds of mist play a role in combating climate change?

[Read MORE](#)

The Weather Is What You Wear: Unpacking the Clothing Connected to Different Climates in the United States

November 6, 2018 - The Washington Post

With the recent onset of autumnlike weather, clothes in your closet that have not seen the light of day for several months are suddenly making an appearance. This is a perfect opportunity to think about the clothes we wear and how they change based on the outside temperature.

[Read MORE](#)

Analysis: The Role of Weather in the Elections

November 6, 2018 - AccuWeather

The elements play a role in Election Day, and consequently in the results. The overall impact of weather on Election Day is mixed on which party gains from these impacts.

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A new European Satellite Launching This Week Is Important for Weather Forecasts

November 6, 2018 - Forbes

The European Space Agency (ESA) is preparing to launch the next satellite in its MetOp series next week.

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[Precipitation Record Helps Forecasting](#)

November 6, 2018 - NOAA/NCEI

A new precipitation Climate Data Record adds greater capabilities for better decision-making concerning severe precipitation and hydrological events.

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[Argentina's Mega-storms Attract Army of Meteorologists](#)

November 6, 2018 - Nature

Massive project aims to improve predictions of intense lightning, hail and flash floods in the shadow of the Andes mountains.

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[Even before Diwali fireworks, Delhi's air is already deadly](#)

November 6, 2018 - Quartz

08 and Nov. 09), according to the System of Air Quality and Weather Forecasting And Research (pdf). But without crackers, the city stands a

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[Ozone Recovery Continues, But Suspected Emissions From China Slows Progress](#)

November 5, 2018 - MotherBoard

The report, representing two years of research, was prepared by the World Meteorological Organization, the UN Environment Programme, NASA

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[Hot temperatures can trigger an RNA response in plants](#)

November 5, 2018 - EurekAlert!

to Bevilacqua, this process offers hints on next steps in future research into more heat and drought resistant crops. "So, if loss of

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[The super typhoon American media forgot](#)

November 5, 2018 - Columbia Journalism Review

suggest that climate change will continue to bring more frequent and intense storms. “What’s happened to the Marianas will happen again—here

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[Nighttime Tornadoes More Than Twice as Likely to Be Deadly](#)

November 5, 2018 - The Weather

twice when a tornado warning is issued. Note, however, this will not sound for a tornado watch or severe thunderstorm warning. Other

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[Five years after Typhoon Haiyan, scores still in harm's way](#)

November 5, 2018 - [Phys.org](#)

between climate change and heavier, devastating rainfall. The storms packing these intense rains are expected to get more harmful as the

[Read MORE](#)

[In new California era of ‘fire-floods,’ where will deadly debris flows strike next?](#)

November 3, 2018 - Ventura County Star

boulders and trees with it. “We know where things are headed,” climate scientist Daniel Swain of UCLA said. “We are just entering this era,

[Read MORE](#)

[Extreme summer weather will be back next year . . . and probably forever](#)

November 2, 2018 - Popular Science

is having on the jet stream,” says Michael Mann, a climate scientist from Pennsylvania State University and the lead author of the new study

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[Why Have Tornadoes Increased in New England This Year?](#)

November 1, 2018 - New England Cable News

on wind speed and damage. Massachusetts is not immune from seeing more intense storms, however. You may remember the EF-2 tornado that

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CloudSat gets a slice of Typhoon Yutu's eye

October 31, 2018 - [Phys.org](#)

The CloudSat overpass reveals the inner details beneath the storms cloud tops. Intense areas of convection with moderate to heavy rainfall,

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Researchers work to make weather information more accessible

October 31, 2018 - NewsOK

and the OU School of Meteorology. Research and development operations housed inside the National Weather Center include the Oklahoma

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Hurricane Michael cost Alabama estimated \$307 million, 2,500 jobs

November 1, 2018 - [AL.com](#)

crops, destroyed buildings and equipment, fencing, and cleanup costs. Hurricane Michael may cost Alabama farmers \$204 million Cotton was

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The oceans, the true keepers of climate change, may meet our grimmest estimates

November 2, 2018 - Mashable

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The Milky Way's Monster, Unveiled

October 31, 2018 - Scientific American

allowing astronomers to study its swirling hot spots much like meteorologists use satellite views to track thunderstorms in a hurricane. “

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