

New Zealand weather and climate news

These clips come courtesy of MetService.

MetService focus

Warmer start to the day, but wet weather looms for western areas

However, MetService meteorologist Andrew James said a frontal system approaching from the west would bring wet weather to western areas of the South Island today.

https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12083329

Warm snap for many

After days of cold weather northwesterlies are set to push the mercury into the high teens for some.

After ranging between 3 degrees Celsius and 13C on Wednesday, Auckland is forecast to hit 18C on Sunday. A day earlier, Christchurch is expected to get to 19C, and Dunedin could see 15C on Saturday - its highest temperature in around 30 days.

<https://www.stuff.co.nz/national/105248980/warm-snap-for-many>

What happened on New Zealand's coldest days ever

Kiwis have a bitterly cold July ahead, after a wet, gloomy June full of sub-zero temperatures across the nation.

MetService is predicting a raft of unusually cold days ahead, adding to an already miserable winter. But it could be much, much worse - just ask Sam Leask.

<https://www.stuff.co.nz/national/105197402/what-happened-on-new-zealands-coldest-days-ever>

After a gloomy June, July is expected to be colder than usual

"I think we're in for a similar story tonight, with that high pressure settling in over us," MetService meteorologist John Laws said.

<https://www.stuff.co.nz/national/105184540/after-a-gloomy-june-july-is-expected-to-be-colder-than-usual>

Trampers lacked essential equipment, coroner says

A coroner says two trampers who died in Tararua Forest Park were missing vital pieces of equipment when they embarked on their fatal trip, and could have saved themselves by abandoning their planned route.

<https://www.stuff.co.nz/national/105169933/trampers-lacked-essential-equipment-coroner-says>

Volcano alert

Geysers and hydrothermal eruptions expected for White Island

Rising waters in White Island's crater lake means Kiwis could soon see steam columns shooting into the air, as well as hydrothermal eruptions.

<https://www.stuff.co.nz/national/105235105/brace-yourself-for-geysers-and-hydrothermal-eruptions-on-white-island>

Extreme weather (and other news) – Australia and Pacific

Ecosystems across Australia are collapsing under climate change

To the chagrin of the tourist industry, the Great Barrier Reef has become a notorious victim of climate change. But it is not the only Australian ecosystem on the brink of collapse.

[Read more here](#)

Climate horizons report : Scenarios and strategies for managing climate risk /

By [Hurley, Sam](#).

Additional authors:

[Mackenzie, Kate](#).

Published by: [Centre for Policy Development](#), ([Australia] :)

Description: 71 p :

Online resources:

<https://cpd.org.au/wp-content/uploads/2018/06/Climate-Horizons-report-2018.pdf>

Subjects:

Climate change -- Australia.

Climate change mitigation.

Copyright: 2018

Australia sees 50 percent chance of El Nino developing this year

SYDNEY (Reuters) - A recent warming of the Pacific Ocean has led to a 50 percent chance of an El Nino weather event developing this year, Australia's Bureau of Meteorology said on Tuesday.

<https://www.reuters.com/article/us-weather-elnino-australia/australia-sees-50-percent-chance-of-el-nino-developing-this-year-idUSKBN1JT0I3>

Kiribati government launches climate change policy

The government of Kiribati has launched what it calls its first ever climate change policy.

<https://www.radionz.co.nz/international/pacific-news/361002/kiribati-government-launches-climate-change-policy>

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

Ethiopia: Weather Forecasting Credibility

Ethiopia National Meteorology Agency (NMA) has been serving as the nation's authoritative source of providing weather forecasts for the public, marine, and aviation and the like. When conditions warrant, it also issues warnings. But, some have doubt about the reliability of its meteorological information. So how credible is the agency's weather forecasting ?

<http://allafrica.com/stories/201807030697.html>

NASA finds Typhoon Prapiroon affecting Korean Peninsula, southern Japan

Typhoon Prapiroon is moving into the Sea of Japan and was lashing the Korean Peninsula and southern Japan when NASA-NOAA's Suomi NPP satellite passed overhead.

https://www.eurekaalert.org/pub_releases/2018-07/nsfc-nft070318.php

Japan, Korean Peninsula and China put on alert for threats from future Typhoon Maria

After impacting Guam and the Mariana Islands late this week, Maria is expected to strengthen into a powerful typhoon with its sights set on the area from eastern China to the Korean Peninsula and Japan.

<https://www.accuweather.com/en/weather-news/japan-korean-peninsula-and-china-put-on-alert-for-threats-from-future-typhoon-maria/70005397>

International news and research

UK forecaster issues 1st ever thunderstorm alert

LONDON (AP) — Britain's Met Office weather forecasting service has issued its first thunderstorm alert in the agency's 164-year history.

<http://uk.businessinsider.com/ap-uk-forecaster-issues-1st-ever-thunderstorm-alert-2018-7/?r=AU&IR=T>

How do you predict hailstorms in the summer in Bengaluru?

June brings with it a few things – the peak of the mango season and the official arrival of summer. Through what was a pleasant June, citizens in the city were treated to showers and even a hailstorm in certain parts of the city. While long-time residents of the city are used to drastic swings in the weather and temperature over the course of a day, it is interesting to investigate if technology can play a role in better predicting the weather. While hailstorms offer a welcome respite from the heat, they can also cause damage. More severe storms can do a lot more than just dent a car.

<https://yourstory.com/2018/07/hailstorms-weather-forecasting-artificial-intelligence/>

"Cloud-sourcing: In Touch with Weather from Land, Sea and Air" photo and video exhibition launched

Hong Kong (HKSAR) - The Director of the Hong Kong Observatory, Mr Shun Chi-ming, and the Chief Executive Officer of the Airport Authority Hong Kong (AA), Mr Fred Lam, officiated at the opening ceremony of the "Cloud-sourcing: In Touch with Weather from Land, Sea and Air" photo and video exhibition at the Hong Kong International Airport today (July 3).

Representatives from the organisations that jointly organised the photo and video collection campaign with the Observatory were also invited to attend.

[Read more here](#)

Infrared NASA image reveals Hurricane Fabio's power

When NASA's Aqua satellite passed over Hurricane Fabio in the Eastern Pacific Ocean it had strengthened into a hurricane hours earlier. Infrared imagery showed that Fabio appeared more organized.

https://www.eurekalert.org/pub_releases/2018-07/nsfc-ini070318.php

Iranian General Accuses Israel Of Stealing Its Snow And Clouds

Here is a fun fact for you: you cannot steal another country's clouds or snow. You could steal a tiny bit of their snow if you surreptitiously stuffed it into a cool bag, but you'd probably get stopped at customs. And yet, for some reason – political and regional tensions, we suppose – a military head from Iran has accused Israel of doing just that.

<http://www.iflscience.com/environment/iranian-general-reportedly-accuses-israel-stealing-snow-clouds-we-just-cant-even/>

Did Israel steal Iran's clouds? Tehran looks for source of 'suspicious' climate change

As Iran is suffering from severe drought, its officials are struggling to explain the disastrous weather conditions. An Iranian general believes Israel is behind the cloud and snow theft, but meteorologists cast their doubts.

<https://www.rt.com/news/431583-israel-iran-no-clouds/>

WMO

WMO Council approves new strategic plan

Geneva, 3 July 2018 - A new Strategic Plan to guide the future direction of the World Meteorological Organization has been approved by its Executive Council, aiming at a more integrated Earth system approach to meet the inter-connected challenges of the 21st century.

[Read more here](#)

WMO Invests in a Generation of Female Leaders in Agricultural Meteorology

The World Meteorological Organization (WMO) is continuing its drive to build broad-based female leadership to ensure strong and inclusive governance.

[Read more here](#)

JMA/WMO Workshop on Quality Management of Surface Observations - RA II WIGOS Project (Tokyo, Japan, 19-23 March 2018)

The JMA/WMO Workshop on Quality Management of Surface Observations - RA II WIGOS Project was held at the Japan Meteorological Agency (JMA) headquarters in Tokyo, Japan, from 19 to 23 March 2018. The event was attended by 28 experts from 10 National Meteorological and Hydrological Services (NMHSs) in WMO Regional Association II (RA II) (Bangladesh, Cambodia, Lao People's Democratic Republic, the Maldives, Myanmar, Pakistan, Sri Lanka, Thailand, the United Arab Emirates and Viet Nam), the Regional Instrument Centre (RIC) Beijing (China), RIC Manila (the Philippines), the WMO/CIMO Lead Centre on Precipitation Intensity (University of Genoa, Italy) and WMO.

[Read more here](#)

Satellites and radar

AMT

From model to radar variables: a new forward polarimetric radar operator for COSMO by Daniel Wolfensberger and Alexis Berne <https://www.atmos-meas-tech.net/11/3883/2018/>

Short Summary: This work presents a polarimetric forward operator for the COSMO weather prediction model. This tool is able to simulate radar observables from the state of the atmosphere simulated by the model, taking into account most physical aspects of radar beam propagation and backscattering. This operator was validated with a large dataset of radar observations from several instruments and it was shown that is able to simulate a realistic radar signature in liquid precipitation.

Cyber security and IoT

Cost of cybercrime surges by 62 per cent in 5 years

Malware infections are the most expensive attacks – costing \$2.4 million per incident, according to Accenture and Ponemon Institute

[Read more here](#)

Innovation and technologies (inc data and new products)

ECMWF users test use of virtual reality to visualise data

Participants in this year's Using ECMWF's Forecasts meeting (UEF) from 5 to 8 June 2018 tested the use of virtual reality to visualise weather data. They also heard about ECMWF product updates and showed software or services developed in ECMWF's Member and Co-operating States.

<https://www.ecmwf.int/en/about/media-centre/news/2018/ecmwf-users-test-use-virtual-reality-visualise-data>

Micro-operators to Drive 5G Adoption

Why would mobile operators invest in new network infrastructure when they are only just trying to recoup their investments in existing infrastructure?

https://www.eetimes.com/author.asp?section_id=36&doc_id=1333437

Weather in pictures

Rare 'shelf cloud' appears like an apocalyptic nightmare as it slowly creeps towards the shore in new footage from Michigan resort

These ominous clouds are incredibly rare and hardly ever caught on camera

This one was spotted over Lake Superior in Michigan and triggered a series of unusual weather events

Known as a shelf cloud, it is part of a sub-group of arcus clouds which are often spotted before storms

A downdraft from an advancing storm causes moist warm air to rise, before it cools and forms a cloud

<http://www.dailymail.co.uk/sciencetech/article-5909439/UFO-like-shelf-cloud-appears-like-apocalyptic-nightmare-rolls-Michigan-resort.html>

El Nino / La Nina

A model for super El Niños

Saji N. Hameed,

Dachao Jin &

Vishnu Thilakan

Nature Communications volume 9, Article number: 2528 (2018)

Super El Niños, the strongest and most powerful of El Niños, impact economies, societies, and ecosystems disproportionately. Despite their importance, we do not fully understand how

super El Niños develop their intensity and unique characteristics. Here, combining observational analyses with simple numerical simulations, we suggest that eastern Pacific intensified super El Niños result from the interaction of an El Niño and a positive Indian Ocean Dipole. Further, we identify a self-limiting behavior inherent to El Niño Southern Oscillation (ENSO) dynamics. This behavior—a consequence of the atmospheric Kelvin wave response that develops to the east of ENSO's convective anomalies—dampens sea surface temperature (SST) variations in the eastern Pacific, thereby preventing super El Niños from developing through tropical Pacific dynamics alone. Our model explains the features of the large 1972, 1982, and 1997 El Niños; the large SST anomalies during the 2015 El Niño, however, were likely enhanced by strong decadal variability.

https://www.nature.com/articles/s41467-018-04803-7?WT.feed_name=subjects_physical-oceanography

Climate change / global warming / sea level rise

Rising sea levels could cost the world \$14 trillion a year by 2100

Failure to meet the United Nations' 2°C warming limits will lead to sea level rise and dire global economic consequences, new research has warned.

https://www.eurekalert.org/pub_releases/2018-07/ip-rsl062918.php

Journals online

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Bulletin of the American Meteorological Society - Volume: 99, Number: 6 (June 2018)

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How Satisfied Are AMS Members with the Society?: Results from the 2014 AMS Survey

Imke Durre, Mona Behl, Rebecca Haacker, and Redina Herman

MEETING SUMMARY

“Grand Challenges” in Big Data and the Earth Sciences

S. L. Sellars

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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.

Experts now predict a 'below-average' 2018 hurricane season

NOLA.com - 07/2/2018

Experts are now forecasting a "below-average" Atlantic hurricane season based on unusually cold temperatures in portions of the Atlantic

Bacteria proven to be worth their salt

Phys.org - 07/2/2018

tolerate environmental stresses, including salinity, drought and extreme temperatures. Heribert Hirt's research team at KAUST have found a

How Satellites Avoid Attacks And Space Junk While Circling The Earth

Forbes - 07/2/2018

the Chinese tested an anti-satellite weapon that hit one of its old weather satellites at a distance of 530 miles above Earth, creating more

[If you die via asteroid, this is how it will happen](#)

[MSN.com](#) - 06/30/2018

engulfed by a huge fireball or swallowed by a massive tsunami. The journal Geophysical Research Letters in 2017 published an analysis of the

[Southern California's cliffs are on losing end of rising sea](#)

[MSN.com](#) - 06/30/2018

tools needed to make these kinds of choices. Like hurricane and climate forecasting, projecting how much erosion will accelerate due to sea

[FY19 Appropriations Bills: National Oceanic and Atmospheric Administration](#)

The American Institute of Physics - 06/29/2018

weather forecasting, hurricane intensity forecasting and flood forecasting and mitigation capabilities; improving operational and research

[Why does Earth's magnetic field flip?](#)

Newsweek - 06/29/2018

Underneath our feet, deep down in the Earth, liquid iron is producing the magnetic field that we all take for granted. But every now and then

[These two exoplanets might have seasons like Earth](#)

Newsweek - 06/29/2018

Two exoplanets in the habitable zones of their stars probably have stable climates and regular seasons, scientists have discovered. One of them

[Active volcano discovered beneath Antarctic ice sheet could be rapidly melting glacier](#)

The Independent - 06/29/2018

An active volcano has been unexpectedly discovered beneath a rapidly vanishing glacier in Antarctica by a team of scientists studying the melting ice shelf.

How climate change is increasing the risk of wildfires

Phys.org - 06/29/2018

during winter and spring – which are also known consequences of climate change – provide more favourable conditions for plant growth and

Historic Shift Means the Arctic Ocean Could Become Part of the Atlantic

LiveScience - 06/29/2018

findings were published online June 25 in the journal Nature Climate Change. Original article on Live Science. You'd Also Like Mexico-

The Weirdest Weather Events of 2018 So Far

The Weather - 06/28/2018

chance of a tornado hitting structures or even trees to allow the National Weather Service to rate a tornado. The June 6 tornado north of

Exploring the Interplay Between Ocean Eddies and the Atmosphere

Eos - Earth and Space Science News - 06/28/2018

Ocean Mesoscale Eddy Interactions with the Atmosphere: A CLIVAR Workshop; Portland, Oregon, 17–18 February 2018

Kids in Hot Cars: Tragic Misconceptions

The Front Page — Blog of the American Meteorological Society - 06/28/2018

and was reviewed and refined in a paper in the Bulletin of the American Meteorological Society, by Andrew Grundstein, John Down, and Vernon

How wineries from Oregon to France are adapting to climate change

CBS News - 06/28/2018

DALLAS, Ore. -- When an Oregon valley famed for its wine heats up under the afternoon sun, Pacific Ocean winds rush through a dip in the mountains

Why Hurricanes Almost Never Form Near Or Cross The Equator

Forbes - 06/28/2018

Hopefully it is clear why formation of tropical cyclones is rare near the equator, but can a hurricane cross the equator if it has already formed beyond 5 degrees latitude?

Atlantic Hurricane Season Snoozing As June Comes To A Close

Forbes - 06/28/2018

We've only had one named storm so far—Alberto—and it formed before the official start of the season.

A long-duration heat wave is beginning in Washington when it will frequently feel as if it's 100

The Washington Post - 06/28/2018

The culprit for the heat wave is an area of high pressure at high altitudes, sometimes called a heat dome

Climate change linked to potential population decline in bees

EurekAlert! - 06/28/2018

for the persistence of a pollinator under climate change," was supported by the National Science Foundation (award number DGE 11-43953) and

Mathematicians Tame Turbulence in Flattened Fluids

Quanta Magazine - 06/27/2018

to get readings of turbulence at the bottom of a hurricane, crucial data for improving hurricane forecasts. This was the first — and last —

Narrow Channels on Mars Were Formed by Rainstorms, New Study Claims

Haaretz.com - 06/27/2018

Mega-floods from groundwater may have formed the largest Martian channels, but rainstorms eroding the surface seem to have created narrow gully networks 3.7 billion years ago

[A Seismic Change in Predicting How Earthquakes Will Shake Tall Buildings](#)

New York Times - 06/27/2018

The crucial changes in the new models are that they rely on local conditions, not global averages, and they model the ground more deeply.

[Strange geologic activity under New England surprises scientists](#)

CNN - 06/27/2018

Similar to a rising bubble in the lamp, portions of the area under the Northeast are rising because they are slightly warmer than the surrounding material.

[Experimental forecasts could help Guatemala recover from volcanic eruption](#)

[Phys.org](#) - 06/27/2018

recovery from the blast. Ángel G. Muñoz, a climate scientist at Columbia's International Research Institute for Climate and Society (IRI)

[Number of Tornado Reports So Far This Year the Lowest in 13 Years](#)

Weather Underground - 06/26/2018

actual tornado count for each year is lower. (NOAA/Storm Prediction Center) (VIRTUAL REALITY EXPERIENCE: Live the Formation of a Tornado)

[The planet's most frigid region is even colder than scientists thought](#)

SFGate - 06/26/2018

in the valleys near the top of Antarctica's ice sheet. Weather satellites had detected temperatures there that could tumble as low as minus

[Blood Moon 2018: Longest Total Lunar Eclipse of Century Occurs July 27](#)

[Space.com](#) - 06/26/2018

The longest total lunar eclipse of the 21st century is just a month away. The total phase of the "blood moon" eclipse of July 27 will last 1 hour and 43 minutes

Green electricity isn't enough to curb global warming

UPI.com - 06/26/2018

U.S. judge tosses climate lawsuits by California cities, but says science is sound

Science - 06/26/2018

added. "We're pleased that the court recognized that the science of global warming is no longer in dispute. Our litigation forced a public

Hit by extreme weather, Zimbabwe rolls out triple climate policy

Reuters US News - 06/26/2018

Hit by extreme weather, Zimbabwe rolls out triple climate policy

WMO steps up action on water

ReliefWeb - 06/25/2018

that it needs to inform government development policies. "The leading role of WMO in operational hydrology is needed more than ever before,

Increase in storms could have 'catastrophic impact' on fishing industry

Phys.org - 06/25/2018

UK are projected to become more frequent and intense over the next two centuries and more dramatic storms are expected in the North Sea and

NASA releases 'turbulent' photo of Jupiter's clouds

USA Today - 06/25/2018

Catch the sights and sounds NASA's Juno space probe captured as it orbited Jupiter. USA TODAY Jupiter looks less like a planet and more like a painting

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My latest WeatherEye from John Maunder

<https://www.sunlive.co.nz/blogs/12233-auranga-june-rainfalls-18982018.html>

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