

## New Zealand weather and climate news

### Thanks to MeteService for these clips

#### *MetService*

#### Foggy weather: Auckland traffic warning with motorists urged to drive to conditions

Motorists are being urged to be extra careful on the roads as fog again blankets the city, making for a slow, murky drive into work this morning.

#### Hawke's Bay in for an 'uneventful' wet week

New Zealand Herald

Hawke's Bay is in for a uneventful, but grey, wet week as the kids head back to school. MetService meteorologist Tamara Vuksa said Hawke's Bay ...

#### Relief for ski field operators after fresh dump of snow

Stuff.co.nz

While patchy weather kept most ski fields in the South Canterbury area ... the good stuff underneath," Mt Dobson's business manager Mike Smith said.

#### Fog causes plane diversions in Wellington

Stuff.co.nz

MetService meteorologist Claire Nickson said the fog formed over Hutt Valley on Monday morning then a light northerly wind pushed it over the airport.

#### Windy Wellington shaped by nature - developments in the city dependent on strict wind regulations

In Lower Hutt there's a styrofoam model of Wellington sitting in a wind tunnel with pieces of grain scattered over it.

Here, developers will pay up to \$25,000 to have their building designs tested, to see how it will change the way a Wellington gust affects those walking along the streets.

#### Auckland's water storage sits comfortably above first stage of restrictions but dry periods loom

New Zealand Herald

Noll said an El Niño sitting over the central equatorial Pacific was partly to blame for the dry conditions so far this year. "Known as El Niño Modoki, it's a ...

## **MetOcean**

### MetOcean Solutions joins CSIRO for Port Phillip Bay Coastal Hazard Assessment

MetOcean Solutions is partnering with CSIRO to undertake a coastal hazard assessment for Port Phillip Bay, performing data analysis and numerical modelling of climate change scenarios to understand the potential coastal hazards impact on the area.

## **WMO**

### Earth experienced warmest June on record

The US National Oceanic and Atmospheric Administration (NOAA) has confirmed that the Earth just had the warmest June on record, ahead of June 2016. This is in line with the other major datasets from...

Extreme weather (and other news) – Antarctica and offshore

### Strong storms also play big role in Antarctic ice shelf collapse

Warming temperatures and changes in ocean circulation and salinity are driving the breakup of ice sheets in Antarctica, but a new study suggests that intense storms may help push the system over the edge.

### Robots roaming in Antarctic waters reveal why Ross Ice Shelf melts rapidly in summer

A new study reveals how local factors influence the Ross Ice Shelf's stability, refining predictions of how it will change and influence sea rise in the future.

### Snow cannons could restore Antarctic ice, but at a steep cost

The Weather Network

Tuesday, July 23rd 2019, 3:43 pm - The hypothetical massive project would be very costly, and do serious damage to the Antarctic's pristine ...

## **Extreme weather (and other news) – Australia and Pacific**

Murray-Darling Basin in 'most severe' two-to-three year drought conditions in 120 years of records ...

ABC News

"While we haven't quite hit the mark for an El Nino declaration we've been very close, and we have been very close for a long time. "The Indian Ocean ...

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

Aboitiz weather unit: PH behind curve in tapping weather info for business

ABS-CBN News

Weather Solutions President Jojo Marasigan admits the Philippines is behind the curve in terms of tapping weather information for business ...

Olympics: Dangerous heat, wild weather a major challenge for Tokyo Games

Kyodo News Plus

Several organizations have turned to a weather forecasting company to feed them firsthand meteorological data in a bid to understand what to expect ...

Indian weather and climate research uplift

Met Office (press release)

Indian weather and climate research uplift ... This innovation demonstrates the first step towards Indian research partners developing an operational ...

Firm finalised to carry out cloud seeding

The Asian Age

Mumbai: The state government has finalised a Bengaluru-based company, Khyati Climates, to carry out cloud seeding in Maharashtra during the ...

Thailand's Meteorological Department Warns of Lowest Rain in Decade

Chiang Rai Times

BANGKOK – Thailand's Meteorological Department has warned that the ... She attributed the weather condition to the weak southwestern monsoon.

[Kuwait- Meteorological Center keen on transparency, accurate weather reports - officials](#)

MENAFN.COM

Speaking to KUNA, officials from the Kuwait Meteorological Center -- affiliated with the Directorate General of Civil Aviation (DGCA) -- indicated that ...

### **Extreme weather (and other news) – Americas and Europe**

[UK weather: 'Six-week heatwave' on its way as Britain set to bask in 35C temperatures](#)

Mirror.co.uk

The Weather Company is also predicted sunny spells. Katie Greening, a meteorologist for The Weather Company, said the weather is due to pick up ...

[The Potential Economic Fallout From France's Heatwaves](#)

Hellenic Shipping News Worldwide

France is slowly taking stock of the changes which periods of prolonged hot weather might bring. Research shows that as the thermometer rises, ...

[Europe's Most Important River Risks a Repeat of Historic Shutdown](#)

Bloomberg

“Extreme weather events are becoming more common,” Chancellor Angela Merkel said this month in a weekly podcast. “We must do more” to protect ...

[Heatwave for much of the UK](#)

Met Office (press release)

A Met Office study into the UK heatwave last summer showed that it was 30 times more likely to occur now than in 1750 because of the higher ...

International news and research

[See NASA's weather data reimaged as a gorgeous antique map](#)

Fast Company

It's an anachronism, mashing up a time when you could only predict seasonal weather at an incredibly basic level with modern technologies that allow ...

Understanding AccuWeather RealFeel® Temperature will make a significant difference for ...

AccuWeather.com

As a heat wave unfolds over the Midwest and Northeast, AccuWeather warns people to consider not only the temperature on their mobile phones and ...

Dr. Warren Washington, pioneering scientist, on the birth of climate modeling and advising six

...

WebWire (press release)

His thesis was in the groundbreaking area of using atmospheric data for weather forecasting based on physics theory. In the United States, NCAR was ...

Smart irrigation model predicts rainfall to conserve water

A predictive model combining information about plant physiology, real-time soil conditions and weather forecasts can help make more informed decisions about when and how much to irrigate. This could save 40 percent of the water consumed by more traditional methods, according to new research.

Adoption of Weather Monitoring Network Market to Surge During the Forecast Period Owing to

...

Advancements in technology in the recent decades have also improved the overall weather monitoring network for a more precise outlook on the

Shipping Out: HT's new Travel Advisory for Diplomats (Adverse Weather, Disturbances, Terrorism ...

Harbour Times

We're closely watching recent days South China Sea activity that involves navies as well as oil and gas vessels. Multiple media outlets described a ...

Water-smart green roofs and plazas make a splash in Rotterdam

The National

The "smart flow control" system that irrigates the farm is connected to weather forecasting technology and knows 12 hours ahead of coming rain that it ...

Canadians tear apart The Weather Network after it suggests they should stop eating beef

The Post Millennial

According to The Weather Network Canadians can save the planet by ... Can you please focus your time and efforts on better weather forecasting ...

What is a 'heat dome' and how does it really work?

The Weather Network

"That makes it hard to say for certain what is and isn't a heat dome," Weather Network meteorologist Michael Carter says. "But what is certain is that we ...

## **Aviation**

How runways explain wind patterns

It may seem like just a strip of tarmac that helps your plane take off, but airport runways actually reveal fascinating things about wind patterns across the globe. You can see the phenomenon for yourself at Trails of Wind, an interactive visualization by the data visualization firm Figures.

Read more: The fascinating thing our airports reveal about the natural world

Lukla: The World's Most Dangerous Airport

Forbes

Airports at high-altitude present dangers due to the effect that low air ... Despite the short distance and short flight-time, the weather in Lukla can often ...

Etihad Airways Pilots Are Using a New EFB Application for Real-Time Weather Updates

Aviation Today

Etihad Airways is deploying a new cloud-hosted electronic flight bag (EFB) weather forecasting application across 100 of its in-service aircraft fleet that ...

## **Business/Insurance**

[Airline capacity, weather conditions delay online shopping parcels' arrival](#)

Stuff.co.nz

New Zealand Post is blaming airline capacity and bad weather for delays getting packages to New Zealand. A spokeswoman said its international ...

[Weather Forecasting for Business Market to Witness Robust Expansion by 2024](#)

Honest Version

The Weather Company. Right Weather LLC. Fugro. MeteoGroup. AWIS. Hometown Forecast Services. Sailing Weather Service. WeatherBell Analytics.

Communications/social media

[Weatherzone forecast to leave Nine stable](#)

The Australian Financial Review

The clouds are building over Nine's time at weather forecasts and meteorology services business Weatherzone. Street Talk understands Nine and its ...

## **Energy and Mining**

[Artificial islands in the North Sea could power millions of UK homes](#)

Wind farms that are built more than 30km off the coast can yield more energy but are costly – at least for now

Fire

[Thanks to climate change, parts of the Arctic are on fire. Scientists are concerned](#)

USA TODAY

It's the opposite of hell freezing over: Satellite images are showing areas of the Arctic catching fire. From eastern Siberia to Greenland to Alaska, ...

[Study Explores the Effect of Smoke on Weather and Climate](#)

AZoCleantech

Study Explores the Effect of Smoke on Weather and Climate ... wind, and other weather variables are provided by NOAA and NASA satellites.

## **Health**

What the UK's blistering heatwave is doing to your brain

Sunny weather might briefly lift our moods, but research suggests that heatwaves bring with them increased violence, road rage and all kinds of grumpiness

Researchers identify hidden weather hazard that could put millions of people at risk

NEW research, led by Loughborough University academics, has found that tropical cyclones followed by deadly heat is an emerging weather threat that could put millions of people at risk as global temperatures continue to rise.

History

'They would get killed': The weather forecast that saved Apollo 11

Stars and Stripes

It was only spared at the last minute by two canny meteorologists with access to a top-secret weather satellite. In the years leading up to Apollo 11, ...

## **Satellites and radar**

UTA physicist studying how extreme weather in space affects satellites

EurekAlert (press release)

"We want to see how that electrical current created during space weather episodes transfers and affects space and the Earth," said Ramon Lopez, ...

Innovation and technologies (inc data and new products)

Why are all weather apps different and which one should you trust?

Telegraph.co.uk

There are radar networks dedicated to reading rainfall, countless weather satellites monitoring the Earth, aircraft readings, AI 'robots' used to clean up ...

## **Weather in pictures**

### 'Rainbow cloud' spotted over Tasmania actually snap of 'rare' cloud iridescence

A rainbow-soaked cloud that appeared over Tasmanian skies this week has wowed some social media users and confused others, with many left wondering what it is and whether it is even real.

<https://www.abc.net.au/news/2019-07-18/rainbow-cloud-photo-captures-rare-iridescence/11320214>

## **Space weather**

### Canada Space Agency to study solar winds in new international project

Radio Canada International (en)

The SMILE mission is to send a satellite into space to understand space weather phenomena and their impacts on our planet. The spacecraft will orbit ...

Climate change / global warming / sea level rise

### Taking on one of the biggest causes of climate change

A project has begun in New Zealand for the refrigerants industry to tackle one of the most potent, but least known causes of climate change.

### Iwi leader's climate change case against government: papers filed

The Far North iwi leader who said he would take the government to court over inaction on climate change has filed court papers this afternoon.

### Ozone threat from climate change

We know the recent extreme heat is something that we can expect more of as a result of increasing temperatures due to climate change. But a new study warns that there's another impact -- worsened air quality due to an increase in the number and intensity of 'ozone alert' days.

### First glacier lost to climate crisis memorialised in Iceland

The Weather Network

Monday, July 22nd 2019, 6:17 pm - Okjökull, the Icelandic glacier that was the subject of the 2018 documentary "Not OK" has melted away, and three ...

[Water-smart green roofs and plazas make a splash in Rotterdam](#)

Projects sprouting across Rotterdam aim to keep communities safer from climate extremes, while bringing them closer together

Odd spot

[Nebraska Meteorologists Bake Biscuits in Hot Car](#)

NewsNet

It's so hot in Nebraska that the National Weather Service is baking biscuits in a parked car. The team placed four biscuits on a baking sheet on the ...

## **Journal and articles online**

### **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.

[Downstream influence of Mesoscale Convective Systems: Part 2, influence on ensemble forecast skill and spread](#)

S. J. Clarke, S. L. Gray, N. M. Roberts

First Published: 12 July 2019

[Efficient Dynamical Downscaling of General Circulation Models Using Continuous Data Assimilation](#)

Srinivas Desamsetti, Hari Prasad Dasari, Sabique Langodan, Edriss S. Titi, Omar Knio, Ibrahim Hoteit

First Published: 09 July 2019

Investigating the GPM Dual-Frequency Precipitation Radar Signatures of Low-Level Precipitation Enhancement

Leonardo Porcaccia, P.E. Kirstetter, V. Maggioni, S. Tanelli

First Published: 08 July 2019

Linear theory of shallow convection in deep, vertically sheared atmospheres

D. J. Kirshbaum, D. N. Straub

First Published: 08 July 2019

Assimilation of SMOS brightness temperatures in the ECMWF Integrated Forecasting System

J. Muñoz-Sabater, H. Lawrence, C. Albergel, P. Rosnay, L. Isaksen, S. Mecklenburg, Y. Kerr, M. Drusch

Version of Record online: 11 July 2019

Bias-corrected (BC) SMOS brightness temperature data are assimilated in the ECMWF Integrated Forecasting System. The standard deviation after BC at 40° and X polarization is shown in the figure. Several experiments are tested assimilating SMOS data in combination with 2 m air temperature, 2 m relative humidity and ASCAT soil moisture retrievals. The impact of the analyses is evaluated for both the soil moisture and atmospheric variables in the lower troposphere.

Table of Contents Alert

**Bulletin of the American Meteorological Society - Volume: 100, Number: 7 (July 2019)**

IN BOX

Improving Climate Change Literacy and Promoting Outreach in an Undergraduate Atmospheric Sciences Program

Janel Hanrahan and Jason Shafer

Improving Harvey Forecasts with Next-Generation Weather Satellites: Advanced Hurricane Analysis and Prediction with Assimilation of GOES-R All-Sky Radiances

Fuqing Zhang, Masashi Minamide, Robert G. Nystrom, Xingchao Chen, Shian-Jian Lin, and Lucas M. Harris

ARTICLES

Toward Convective-Scale Prediction within the Next Generation Global Prediction System

Linjiong Zhou, Shian-Jiann Lin, Jan-Huey Chen, Lucas M. Harris, Xi Chen, and Shannon L. Rees

PostProcessing and Visualization Techniques for Convection-Allowing Ensembles

Brett Roberts, Israel L. Jirak, Adam J. Clark, Steven J. Weiss, and John S. Kain

A Sea Level Stratospheric Ozone Intrusion Event Induced within a Thunderstorm Gust Front

Joel Dreessen

The Aerosols, Radiation and Clouds in Southern Africa Field Campaign in Namibia: Overview, Illustrative Observations, and Way Forward

Paola Formenti, Barbara D'Anna, Cyrille Flamant, Marc Mallet, Stuart John Piketh, Kerstin Schepanski, Fabien Waquet, Frédérique Auriol, Gerard Brogniez, Frédéric Burnet, Jean-Pierre Chaboureau, Aurélien Chauvigné, Patrick Chazette, Cyrielle Denjean, Karine Desboeufs, Jean-François Doussin, Nellie Elguindi, Stefanie Feuerstein, Marco Gaetani, Chiara Giorio, Danitza Klopper, Marc Daniel Mallet, Pierre Nabat, Anne Monod, Fabien Solmon, Andreas Namwoonde, Chibo Chikwililwa, Roland Mushi, Ellsworth Judd Welton, and Brent Holben

A Standardized Atmospheric Measurement Data Archive for Distributed Cloud and Precipitation Process-Oriented Observations in Central Europe

Andrea Lammert, Akio Hansen, Felix Ament, Susanne Crewell, Galina Dick, Verena Grützun, Henk Klein-Baltink, Volker Lehmann, Andreas Macke, Bernhard Pospichal, Wiebke Schubotz, Patric Seifert, Erasmia Stamnas, and Bjorn Stevens

A Global Gridded Dataset of the Characteristics of the Rainy And Dry Seasons

Rodrigo J. Bombardi, James L. Kinter, and Oliver W. Frauenfeld

A Meteotsunami Climatology along the U.S. East Coast

Gregory Dusek, Christopher DiVeglio, Louis Licate, Lorraine Heilman, Katie Kirk, Christopher Paternostro, and Ashley Miller

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**My latest WeatherEye from John Maunder**

<https://www.sunlive.co.nz/blogs/13600-global-temperatures-1996-june-2019.html>

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Thanks to our regular contributors.

For/from the Met Society