New Zealand weather and climate news

These clips come courtesy of MetService.

MetService mentions

Tornado, torrential rain, hail, thunderstorms smash North Taranaki

Wild weather has ripped through New Plymouth with reports of a tornado crossing State Highway 3 just north of the city.

A police spokesperson said they had received reports of a trampoline hitting a car on Devon Rd (SH3) and also a tornado hitting a vehicle, but it was unclear if the jobs were related.

North Island hit by thunderstorm, strong winds and heavy rain

MetService meteorologist Curtis Hayes said the worst of the storm had past Auckland by 9.20pm.

Predicted thunderstorms scatter rain and hail on Wellington coast

MetService meteorologist Sarah Haddon said snowfalls in the South Island were likely to continue until at least lunchtime on Sunday down to 300 metres, with significant accumulations expected above 500m.

South Island roads remain closed after stormy Saturday

MetService meteorologist Peter Little said on Saturday that snow, thunderstorms and rain were all on the cards for New Zealand over the weekend.

Auckland house struck by lightning, roofs damaged and power lines down during storm

Stuff.co.nz

On Sunday evening, MetService issued severe thunderstorm warnings for Northland, Auckland, Great Barrier Island, Coromandel Peninsula, Waikato ...

South spared worst of wild weather

Otago Daily Times

MetService Oamaru Airport recorded more than 82mm of rain over the two days, double what it usually receives during August. More than 40mm of ...

Auckland's got that spring feeling, but winter isn't over yet

Stuff.co.nz

Auckland is beginning to see some spring-like symptoms, but MetService warns winter isn't over yet. Daffodils and lambs have been spotted across ...

MetOcean

NYSERDA Deploys Floating LiDARs in New York Bight

Offshore WIND

According to NYSERDA, the metocean buoys are designed specifically for offshore wind and equipped with environmental and wildlife sensors.

WMO

JMA's Tokyo 2020 Weather Portal Website for Olympic and Paralympic Games

Posted:

The Japan Meteorological Agency (JMA) has launched a portal website for access to weather information for the Tokyo 2020 Olympic and Paralympic Games to be held from 24 July to 9 August 2020 and from...

Extreme weather (and other news) – Australia and Pacific

More investment needed in extreme weather in Pacific

The 5th meeting of the Pacific Meteorological Council (PMC) has wrapped up in Apia, Samoa.

Tonga Met identifies reform needs

Matangi Tonga

Tonga's National Meteorological Service needs reforming in order to manage an increasing number of climate related hazards and projects, 'Ofa ...

Samoa Meteorological Services Growing From Strength To Strength

ReliefWeb

Mulipola highlighted several key outcomes from the SMS, including improved meteorological services for air navigation, improved marine weather ...

Progress Made On The Pacific Regional Climate Centre

ReliefWeb

Endorsed at the fourth Pacific Meteorological Council, in Solomon Islands in 2017, this RCC will provide Pacific National Meteorological and ...

BOM forecasts 'Antarctic winds' for NSW weekend as towns receive first snow in decades

ABC Local

On Friday, destructive winds battered south-east Australia, causing chaos at airports, ... A 68-year-old man from South Australia who was skiing with friends at ... in Katoomba, were also cancelled due to "extreme weather conditions".

What is thundersnow and how does it happen?

ABC Local

Snow and thunder storms are forecast for parts of south-east Australia as a .... visibility associated with the snow, as well as that lightning," she said.

Melbourne weather: Frankston pier breaks off, flights cancelled as cold front lashes southern states

The Australian

Southern states are being buffeted by strong winds and freezing weather which has caused snow over elevated areas in Victoria and NSW overnight, ...

Snowfalls in Australia have a colourful history, we reminisce, as south-east braces for cold blast

Snow falls on the mountains every year in Australia, but only rarely does it spread down onto the plains and cities.

According to Blair Trewin, senior climatologist at the Bureau of Meteorology and probably Australia's leading weather history aficionado, the wintery snowfall event forecast for the next few days is likely to be one of the most significant in recent years.

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

Typhoon Lekima leaves at least 30 people dead, 5 million more affected

The Thaiger

In Shanghai, the local weather office issued an orange alert yesterday ... The Thai Meteorological Department has issued a warning to residents of ...

Photos: Flooding claims more than 140 lives in western, southern India

AccuWeather.com

There can be an AccuWeather Local StormMax™ of 300 mm (12 inches) and devastating flooding in the hardest-hit areas. As the storm tracks ...

Two Typhoons Menace Asian Sea Freight Centers

Benzinga

... (TEU) ocean shipping boxes in the first half of the year, according to China's Ministry of Transport. ... A cyclone and typhoon are basically the same weather phenomena; they just have different names in different parts of the globe.

Japan weather bureau says 60% chance of no El Nino, La Nina this year

Euronews

TOKYO (Reuters) – Japan's weather bureau said on Friday there is a 60% chance there will be no El Nino or La Nina from now through the northern ...

Extreme weather (and other news) – Americas and Europe

13-year-old impaled by flying beach umbrella

The Weather Network

A trip to the beach near Gloucester, Massachusetts took a turn for the worse on August 9 when windy conditions began to move in. A 13-year-old boy ...

Just how common are tornadoes in Europe?

As severe thunderstorms continue to hit parts of Europe, the results can be dramatic.

International news and research

Which Weather Model Is Most Accurate? The Answer Might Surprise You

Forbes

However, it is rare that a meteorologist would opt to utilize one model ... To help refine the forecast, meteorologists typically employ an ensemble ...

Back-to-back low snow years will become more common

Posted: 08 Aug 2019 12:25 PM PDT

Consecutive low snow years may become six times more common across the Western United States over the latter half of this century, leading to ecological and economic challenges such as expanded fire seasons and poor snow conditions at ski resorts, according to a new study.

Persistent impacts of smoke plumes aloft

Posted: 08 Aug 2019 12:25 PM PDT

Thunderstorms generated by a group of giant wildfires in 2017 injected a small volcano's worth of aerosol into the stratosphere, creating a smoke plume that lasted for almost nine months. Scientists now explore implications for climate modeling, including models of nuclear winter and geoengineering.

Wicked Hot Boston: Urban Heat Island (UHI) Mapping

Discover Magazine (blog)

“Citizen science is a framework to change the power dynamics in research and ... Citizen science teams were made up of at least one driver and one ... the nationally-implemented NOAA funded forums on extreme weather hazards.

AccuWeather misleads on global warming and heat waves, a throwback to its past climate denial

Washington Post

A week after a punishing heat wave torched the eastern two-thirds of the country, setting numerous records, AccuWeather chief executive Joel Myers ...

Founder of Accuweather says there is NO evidence heatwaves are more pronounced now ...

Daily Mail

Dr Joel Myers, Founder of Accuweather, (pictured), said there is no evidence to suggest heatwaves have become more frequent due to climate ...

Going with the flow: How George Gabriel Stokes's influence still resonates

Irish Times

Where Stokes has had a far deeper influence on weather forecasting and ... gone on to have applications across science and technology," she says.

5G network

Forecasters fear threat of 5G wireless rollout

Science Magazine

But a nearby frequency is critical for weather forecasters. ... Weather satellites see many square kilometers at once, and interference in part of a pixel ...

Advertising/promotion

Stella's weather-targeted ads prove programmatic is a no-brainer for brands

The Grocer

Last month it was reported that grocers saw a decline in their sales for the first time in three years. This is no surprise, given that last year we hit ...

Aviation

Why Climate Change Could Make Your Next Flight a Bumpier One

Bloomberg

The research by meteorologists at the University of Reading in England, published this week in the journal Nature, shows climate change is creating ...

Pilot training programme revived

Khmer Times

Khmer Pilot Training Co Ltd, the only private aviation training school in ... meteorology for pilots, interpreting weather data, airplane performance, ...

ACI launches survey to reveal the impacts of climate change on aviation

International Airport Review

ACI World's Resilience and Adaptation to Climate Change Survey was launched in the wake of weather events such as Typhoon Jebi which resulted ...

Business/Insurance

UK economy shrinks for the first time since 2012

BBC News

Asked about the impact of Brexit, he said: "We saw some significant stockpiling by British businesses in anticipation of the Brexit that never was, and ...

Communications/social media

Storm Track 5 Weather Alert Days offer advance notice on disruptive weather

KCTV Kansas City

Our weather graphics will have red banners with a logo showing "Storm Track 5 Alert Day" which will replace our normal "Storm Track 5" logo that is ...

Universal Weather Climbing in Latin America

Aviation International News

Adolfo Aragon, senior v-p of Latin America and Caribbean for Universal Weather and Aviation (UW&A), said the company is growing in Latin America ...

Energy and Mining

AI-powered weather forecasts are improving predictions for smart grids' energy outputs

GreenBiz

AI-powered weather forecasts are improving predictions for smart grids' ... system can become much more efficient at managing supply and demand. ... then tested against 80 weather forecasts to give an energy generation forecast.

Australia sues wind developers over blackouts

Windpower Monthly

"There were tens of thousands of lightning strikes and a series of mini-tornadoes during the storm which ultimately plunged the South Australia grid ...

Fire

Met Service develops bush fire forecast tool

Loop News Jamaica

It is part of a project by the Met Service in partnership with the Jamaica Fire Brigade (JFB), to establish a comprehensive bush fire warning index for ...

Health

Heat waves brought by climate change could prove deadly for kidney patients

(HealthDay)—New research uncovers yet another population that will be vulnerable to the heat waves that climate change is delivering with increasing frequency: people with kidney disease.

Lightning

Lightning crackles over North Pole in very rare storm

The Weather Network

It's been an unusual summer for the Arctic. Unprecedented tracts of land have burned as wildfires spread beyond any capacity to control them.

Satellites and radar

Japan rocket builders launch into satellite-based data services

Nikkei Asian Review

IHI's weather forecasting service will use data from satellites launched by its rockets to predict weather for periods of two weeks to two months.

Tourism

Brexit, Boeing and blistering weather put Tui on the road to trouble

The Guardian

Brexit, Boeing and blistering weather put Tui on the road to trouble ... The weak pound also made it more expensive for Tui's tour business to buy ...

Transport/roading/shipping/freight

The weather is getting more extreme – and creates more business

ShippingWatch UK

In addition to the shipping companies having to fight their way through increasingly powerful storms that delay shipping and shut down ports, bad ...

CMB becomes shipping's hydrogen leader

Splash 247

Compagnie Maritime Belge (CMB) has well and truly nailed its colours to the mast ... family-controlled company to the forefront of this new fuel for shipping. ... saving solutions, digital fleet performance monitoring and weather routing.

Driver decisions, not dust storm, to blame for fatal head-on truck crash near Truro, SA Police say

Police have criticised motorists who continued to drive in "zero" visibility during Thursday's dust storm on the Sturt Highway, after a fatal head-on truck crash claimed two lives.

This tech helps self-driving cars see well in all weather

ISRAEL21c

“But they were too expensive to be used in mass-market applications,” Ziv Livne, TriEye's VP of product and business development, tells ISRAEL21c.

Cyber security and IoT

Micro Forecasting Taps Into the Weather Internet of Things

Engineering News-Record

He says a roofing job can mean $120,000 to the company, and missing an opportunity to work because of a faulty forecast is costly. “If we don't get out ...

Innovation and technologies and AI

Get a new view of the world's geography, ecology and weather with NOAA's phone app

Washington Post

The National Oceanic and Atmospheric Administration is best known for its satellites, weather forecasting and scientific explorations, such as a recent ...

Cray to supply supercomputing system to boost USAF weather forecasting

Airforce Technology

The Air Force Life Cycle Management Center (AFLCMC) and Oak Ridge National Laboratory (ORNL) will acquire a Cray supercomputing system to ...

Kiwis need to think about what they want from the age of AI, report says

Being more vigilant about who we share our data with, along with regulation, will help keep artificial intelligence technology on the right track, a new report says.

Climate change / global warming / sea level rise

IPCC Climate Change and Land report - Expert reaction

The latest Intergovernmental Panel on Climate Change (IPCC) report on how land use contributes to climate change and how climate change affects the land has been finalised in Geneva.

What the UN's latest big climate report means for NZ

A just-released major UN report on climate change has big implications for agricultural New Zealand, scientists and researchers say.

Climate change conversations can be difficult for both skeptics, environmentalists

Having productive conversations about climate change isn't only challenging when dealing with skeptics, it can also be difficult for environmentalists, according to two new studies.

Heat on the future of food supply

The latest UN climate change report is urging us to change what we eat and how we use the land, writes Seth Borenstein.

How to tell when climate change is to blame

Weather agencies are ramping up their work to offer rapid analysis of climate change's role in extreme weather. The 'attribution science' that underpins the weather reports has been maturing for more than a decade.

We (The Alliance of World Scientists) invite all scientists to sign a short article on climate change

If you are a scientist from any scientific discipline, we invite you to sign our Viewpoint article "World Scientists' Warning of a Climate Emergency" by Ripple et al. 2019, which is now in press with Bioscience Magazine. It is important that we get signatories from a wide variety of scientific disciplines. By signing, you will be included in the full list of scientists who have signed this article and your name will be published in the Bioscience supplement to the article as an official signatory. Before signing, we ask that you view this short article by clicking the "Read the Article" tab below (the main text can be read in < 8 minutes), or read the condensed version directly below. When you click "sign the article" and add your name, you will be indicating that you generally agree with our article, helping get this message to world leaders. Note that signatories speak on their own behalf and not on behalf of their affiliated institutions. After you sign, it may take a couple of hours for your signature to show up on the list of signatories. Note that it may not be possible to sign the article using Internet Explorer, but other web browsers seem to be working.

http://scientistswarning.forestry.oregonstate.edu/

Cloud seeding / Geoengineering

UAE-led research tests how ice clouds could help it rain in the desert

The National

“This is an exciting initiative that is accelerating international research in cloud seeding science and technologies,” said Dr Lawson. “The programme ...

Journal and articles online

Quarterly Journal of the Royal Meteorological Society

Early View

Online Version of Record before inclusion in an issue

RESEARCH ARTICLES

Impacts of future urban expansion on urban heat island effects during heatwave events in the city of Melbourne in southeast Australia

Hosen M. Imran, Jatin Kala, Anne W. M. Ng, Shobha Muthukumaran

Version of Record online: 02 August 2019

(a) Model nested domain configuration (the boundary represents the outer domain with a resolution of 18 km, and d02 and d03 denote the boundaries of the two inner nested domains, with resolutions of 6 and 2 km respectively), (b) current distribution of urban land use, (c) high-density urban expansion according to Plan Melbourne 2050. The numbers 31, 32, and 33 represent the low-density urban, high-density urban, and commercial/industrial areas, respectively.

RESEARCH ARTICLES

Dutch fog: On the observed spatio-temporal variability of fog in the Netherlands

Jonathan G. Izett, Bas J. H. van de Wiel, Peter Baas, J. Antoon van Hooft, Ruben B. Schulte

Version of Record online: 02 August 2019

Fog occurrence in the Netherlands is highly variable in both space and time. Our analysis shows this is related to interannual variability in synoptic-scale pressure-gradient forcing and mesoscale

land-use heterogeneity. In addition to reporting on the observed variability, we present a "Regionally Weighted Index (RWI)" for assessing a site's relative fogginess a priori (shown in this image), even in the absence of meteorological observations.

RESEARCH ARTICLES

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

Version of Record online: 01 August 2019

Time series of similarity in temperature at 850 (top panel) and 500 hPa (bottom panel) between NCEP and different experiments (a,b,d,e) with the Regional Atmospheric Model, and between NCEP and FNL (c,f) at large- and small-scale waves.

RESEARCH ARTICLES

Summertime midlatitude weather and climate extremes induced by moisture intrusions to the west of Greenland

Cory Baggett, Sukyoung Lee

Version of Record online: 31 July 2019

Recent summers in the Northern Hemisphere have been characterized by weather and climate extremes such as heat waves and floods. These extremes are associated with a frequently occurring Rossby wave train pattern that manifests itself downstream from Greenland. Both observational evidence and idealized model experiments reveal that the wave train is induced by a diabatic heat source over Baffin Bay associated with latent heat release from midlatitude moisture intrusions.

RESEARCH ARTICLES

Characterization of the atmospheric boundary layer in a narrow tropical valley using remote-sensing and radiosonde observations and the WRF model: the Aburrá Valley case-study

Laura Herrera-Mejía, Carlos D. Hoyos

Version of Record online: 31 July 2019

The evolution of the atmospheric boundary layer (ABL) in a narrow valley in the Andes is studied, implementing techniques to estimate the mixed-layer height (MLH). The aerosol load allows the use of ceilometer-based MLH detection, especially under stable conditions. The multi-sensor technique is the most robust, performing better in all conditions. The amount of aerosol near the surface is influenced by the evolution of the ABL. Model simulations skilfully reproduce the observed ABL.

RESEARCH ARTICLES

A pragmatic strategy for implementing spatially correlated observation errors in an operational system: An application to Doppler radial winds

David Simonin, Joanne A. Waller, Susan P. Ballard, Sarah L. Dance, Nancy K. Nichols

Version of Record online: 30 July 2019

Research has shown that Doppler radar radial winds (DRWs) have spatially correlated observation errors; however, DRWs are routinely assimilated into convection-permitting numerical weather prediction models with a severely reduced density and assuming uncorrelated errors. We develop an approach that enables the introduction of full, correlated, error statistics; consequently observations with higher spatial density can be assimilated. Results show that the use of correlated error statistics has positive impact on the data assimilation solution without detriment to the computation time.

RESEARCH ARTICLES

Large-scale regional model biases in the extratropical North Atlantic storm track and impacts on downstream precipitation

Marie Pontoppidan, Erik W. Kolstad, Stefan P. Sobolowski, Asgeir Sorteberg, Changhai Liu, Roy Rasmussen

Version of Record online: 29 July 2019

In very large domains, dynamical downscaling results in systematic circulation biases. These biases have an effect on the representation of the North Atlantic storm track; however, the effect of the circulation biases on precipitation over Norway is negligible.

RESEARCH ARTICLES

On the sensitivity of a 4D-Var analysis system to satellite observations located at different times within the assimilation window

Anthony P. McNally

Version of Record online: 29 July 2019

A schematic illustration of the assimilation windows employed by the ECMWF Long Window Data Assimilation (LWDA) system. Black dots represent observations distributed quasi-randomly in time throughout the window.

RESEARCH ARTICLES

Relationship between atmospheric blocking and warm-season thunderstorms over western and central Europe

Susanna Mohr, Jan Wandel, Sina Lenggenhager, Olivia Martius

Version of Record online: 29 July 2019

Two areas – one over the eastern part of the North Atlantic (a) and one over the Baltic Sea (b) – were identified as locations where blocking influences the occurrence of thunderstorms in parts of western and central Europe. Shown is the relative frequency of cases investigated in the study quantifying how often (a) blocking suppresses and (b) blocking supports thunderstorm days in Europe.

RESEARCH ARTICLES

Trends in and closure of the atmospheric angular momentum budget in the 20th century in ERA-20C

Menno A. Veerman, Chiel C. van Heerwaarden

Version of Record online: 28 July 2019

Atmospheric angular momentum (AAM) is a quantity related to the global distributions of surface pressure and zonal wind. We found that the AAM has increased in the 20th century,

mainly due its zonal wind component. However, the AAM budget in the ERA-20C reanalysis is not well-closed, which can be largely attributed to the analysis increments.

RESEARCH ARTICLES

Extreme rainfall sensitivity in convective-scale ensemble modelling over Singapore

Aurore N. Porson, Susanna Hagelin, Douglas F.A. Boyd, Nigel M. Roberts, Rachel North, Stuart Webster, Jeff Chun-Fung Lo

Version of Record online: 28 July 2019

(a) Radar at [0800 UTC-1100 UTC] on 30 October, (b) neighbourhood ensemble probability (NEP) of accumulated rainfall 0800-1100 UTC on 30 October to exceed rain amounts of 6 mm over the 3 h for EC-SINGV, and (c) UM-SINGV. The simulations are initialized at 1500 UTC 29 October.

RESEARCH ARTICLES

Complex systems modelling for statistical forecasting of winter North Atlantic atmospheric variability: A new approach to North Atlantic seasonal forecasting

Richard J. Hall, Hua-Liang Wei, Edward Hanna

Version of Record online: 28 July 2019

A new approach to seasonal forecasting based on complex systems modelling is presented. The focus is on North Atlantic winter atmospheric circulation, specifically the NAO. Polynomial models show greater skill than linear versions and out-of-sample forecasts show promising skill, closely matching the observed time series. Potential nonlinear interactions between predictors are identified.

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Impact of Assimilating Upper-Level Dropsonde Observations Collected during the TCI Field Campaign on the Prediction of Intensity and Structure of Hurricane Patricia (2015)

Jie Feng and Xuguang Wang

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My latest Weather Eye from John Maunder

https://www.sunlive.co.nz/blogs/13668-tauranga-average-july-afternoon-temperatures-19132019.html

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