

New Zealand weather and climate news

Courtesy of MetService Library

MetService mentions

Unusual cold snap forecast for the weekend

SunLive

A cold change is making its way up the country and **MetService** is forecasting rain to turn to snow for some elevated roads. However, most of the wet ...

Weather: Cold change moving up the county bringing snow, chilly days

Stuff.co.nz

MetService is forecasting the possibility of snow on Friday to 600 metres on Banks Peninsula, the Canterbury High Country and Kaikōura, and in the ...

Weather: Wet, windy and cold snap on way with snow flurries possible

Stuff.co.nz

MetService meteorologist Mmathapelo Makgabutlane explained the weather system appears to be bringing heavy rain – especially for Fiordland ...

Weather: Strong winds on the way with increased fire dangers for the south

Stuff.co.nz

MetService meteorologist Mmathapelo Makgabutlane explained the weather system appears to be bringing heavy rain – especially for Fiordland and ...

Wind watch as gales to hit Canterbury

Otago Daily Times

The **MetService** is advising some Canterbury residents to prepare for gale north-westerlies from tomorrow morning. A **MetService** spokesman said a ...

Wind watch as gales to hit South

Otago Daily Times

MetService is advising Clutha, Southland and Fiordland lakes residents to prepare for gale northwesterlies. A **MetService** spokesman said a front was ...

Whanganui weather: Warmer, drier in August with more of the same to come

New Zealand Herald

The weather station at Whanganui Airport recorded 62mm of rain for the month, **MetService** meteorologist Rob Kerr said - in a month where the .

Winter's last gasp: Auckland wakes to unseasonal chilly start

New Zealand Herald

MetService says minimum temperatures across the North Island have plummeted well below average for this time of year, with Auckland dropping to ...

MetService captures clouds forming in koru-like patterns

New Zealand Herald

The clouds were captured by MetService drifting past Auckland earlier this morning. The footage was taken from 36,000km. Last weekend a Kiwi pilot ...

Wild weather causes road chaos, but worst rain has passed

State Highway 6 has been closed “until further notice” through the Lower Buller Gorge after a slip.

The section of road affected is between Westport and Inangahua, while other sections of highway through the Buller Ranges have been affected by more minor slips and washouts thanks to heavy rainfall.

North Canterbury town pounded by 'unbelievable' hail storm

Residents of Oxford in North Canterbury experienced a sudden thunderstorm accompanied by heavy rain and hail on Sunday afternoon, causing a local club to flood.

Covid 19 coronavirus: ESR's new boss on the high-tech fight against pandemic

Fresh from heading state forecaster MetService, Irish-born Peter Lennox has just started as chief executive of ESR. It comes as the Crown research institute is in the thick of responding to the Covid-19 crisis - and as Lennox's own family has been kept apart by the pandemic. Herald science reporter Jamie Morton put these questions to him.

MetOcean

NZ's warming seas: Is another 'marine heatwave' coming?

New Zealand Herald

New Zealand's coastal waters are running unusually warm - but **meteorologists** say it's still too early to tell whether the country will be engulfed in ...

WMO

Extreme summer impacts ice shelves and glaciers

Posted:

Summer 2020 had a major impact on ice shelves and glaciers in the Northern hemisphere. WMO's Global Cryosphere Watch network has prepared a report of the main events, based on contributions from...

South East Europe gets new flash flood App

Posted:

Flash floods are among the most dangerous of all natural hazards. They are hydrometeorological phenomena with enough power to change the course of rivers, bury houses in mud, and sweep away or...

Where does the heat go?

Posted:

The first comprehensive assessment of where the Earth's excess heat is accumulating has been released by the Global Climate Observing System, co-sponsored by the World Meteorological Organization,...

International Day of Clean Air targets air pollution

Posted:

The first International Day of Clean Air for blue skies is being celebrated on 7 September to boost cooperation to tackle air pollution and provide clean air for all.

United in Science report: Climate Change has not stopped for COVID19

Posted:

Climate change has not stopped for COVID19. Greenhouse gas concentrations in the atmosphere are at record levels and continue to increase. Emissions are heading in the direction of pre-pandemic...

Extreme weather (and other news) – Australia and the Pacific

Bureau backs its forecasts as storm rages over aircraft omissions

The Sydney Morning Herald

Professor Lane said satellites were playing a bigger role in **weather forecasting**, meaning aircraft **data** no longer played such a key role. Craig Bishop ...

Australia likely to experience up to 35% more El Niños under new projections

Phys.Org

El Niño is associated with low rainfall in western Pacific regions including in eastern and southern Australia, and increased likelihood of drought, ...

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

Nepal was hit by another devastating flash flood, killing 12

The Weather Network

Jaclyn Whittal, a video meteorologist for The **Weather Network**, was able to reach out to her friend Sukman Pakhrin, a resident of Bhaktapur, Nepal.

Haishen becomes 2020's first super typhoon, targets Japan, South Korea

The Weather Network

The **Weather Network**. Friday, 4 September 2020 5:20 AM. Super Typhoon Haishen could bring devastating damage from strong winds and high tides, ...

Extreme weather (and other news) – Americas and Europe

The Met Office Accidentally Named a Storm 'Sunshine' in Welsh

Gizmodo UK

The **Met Office** already attracts lots of ire for not predicting the precise timing of every act of weather, but the latest wave of criticism is even fiercer than ..

California's 'brutal' heat wave is underway, expected to topple all-time records, escalate fire risks

Washington Post

This 6,000-meter level “represents a threshold that is coincident with record heat over the Western United States,” wrote Ryan Maue, a **meteorologist** ..

How the Iowa derecho has affected 2020 crops

On August 10, 2020, a derecho swept through Iowa, bringing severe winds and significant precipitation across many parts of the state. Nearly 12 million acres of cropland in total were affected in some way, representing about 50 percent of the 24.7 million acres planted in Iowa in 2020.

Wildfires burn through record area in California as blazes continue to spread

Wildfires have burned through a record number of acres in California this year as firefighters continue to battle several large blazes across the state.

One in eight deaths in Europe linked to pollution, environment, EU says

Environmental factors such as air pollution and heatwaves exacerbated by climate change contribute to around 13% of all deaths in Europe, the European Environment Agency (EEA) said on Tuesday.

Tropical Storm Paulette, earliest P-named storm on record, forms in the Atlantic

The storm tops the September 17, 2005, record held by Philippe, continuing 2020 pace of record-setting named Atlantic storms.

Tropical Storms Paulette and Rene could be joined by Sally and Teddy this week

They're continuing this year's pace of record-setting named Atlantic storms.

Wildfires and weather extremes: It's not coincidence, it's climate change

Right on the heels of arguably the West Coast's most intense heat wave in modern history comes the most ferocious flare-up of catastrophic wildfires in recent memory. Meanwhile, just a few hundred miles east, a 60-degree temperature drop over just 18 hours in Wyoming and Colorado was accompanied by an extremely rare late-summer dumping of up to 2 feet of snow.

International news and research

Gravity wave insights from internet-beaming balloons

Posted: 02 Sep 2020 03:24 PM PDT

A better understanding of how gravity waves in the upper atmosphere interact with the jet stream, polar vortex and other phenomena could be key to improved weather predictions and climate models.

Developing models to predict storm surges

Posted: 08 Sep 2020 10:10 AM PDT

Storm surges sometimes can increase coastal sea levels 10 feet or more, jeopardizing communities and businesses along the water, but new research shows there may be a way to predict periods when it's more likely that such events occur. Researchers have developed models to predict extreme changes in sea level by linking storm surges to large-scale climate variability.

Seeing objects through clouds and fog

Posted: 09 Sep 2020 10:21 AM PDT

Using a new algorithm, researchers have reconstructed the movements of individual particles of light to see through clouds, fog and other obstructions.

Aviation

Pilot commemorates first flight over Aoraki/Mt Cook 100 years on

A Canterbury pilot has recreated the first flight over Aoraki/Mt Cook to mark a century since the maiden voyage.

Business/Insurance

Japan's Sompo buys US crop insurer as **weather risks grow**

Nikkei Asian Review

Crop **insurance** provides policyholders **coverage** against the loss of crops to natural disasters or the loss of revenue resulting from price declines. The ...

CRU, Hillridge launch **weather index **insurance****

Grain Central

CROP Risk Underwriting (CRU) and Hillridge Technology today launched a new **Weather** Index **Insurance** product designed to protect farmers ...

Climate change / global warming

Will climate change mean the end of the snowy weather?

Niwa figures show this winter was one of the warmest on record, with some sites recording half their normal snow depths. Nikki Macdonald investigates whether New Zealand's ski fields can weather a warming world.

Warmest winter on record a 'dress rehearsal' for winters to come

Warm winters are becoming a recurring theme in New Zealand.

This year's winter peaked at 1.14 degrees Celsius above average, making it the warmest on record.

Clouds

Tūi forms above Aoraki/Mt Cook in 'once-in-a-millennium' photo

A photographer who captured a “once-in-a-millennium” cloud formation of a tūi perched on Aoraki/Mt Cook sees the image as a “gift” during a challenging time in her life.

Communications/social media

Discovery's purchase of MediaWorks television arm 'best possible outcome' says departing MediaWorks boss

Television channel Three owner MediaWorks has finally found a buyer for its loss-making television arm, which will be bought by Discovery Inc, the US owner of the Discovery Channel.

Covid-19 / Business

Coronavirus: Move to alert level 1 unlikely amid growth of 'sub-clusters'

For 100 days New Zealand appeared to have eliminated coronavirus, however, on August 11, multiple cases popped up in the community again, seemingly out of nowhere.

Now, just as the country's largest cluster, with tentacles stretching from the North Shore to Tokoroa, appears to be mostly contained, the growth of new “sub-clusters” is dashing hopes that life could go back to normal anytime soon.

Some phones not recording visits on Covid Tracer app - unbeknownst to users

A “major technical problem” with the NZ Covid Tracer app means some users have dutifully scanned QR codes without realising their phones failed to record the visits.

Emergency services / preparation

Cold snap doesn't end fire risk, warns Fenz

Otago Daily Times

Fire and Emergency New Zealand (Fenz) said despite snow helping to put out several fires in the past couple of days, people should not become ...

Fire

WILDFIRE

Fire season is coming, and first responders will soon be on high alert around New Zealand. With climate change causing more intense weather, we can expect more extreme wildfires in the future, causing millions of dollars' worth of damage and endangering homes and lives. What is New Zealand's risk from fire, and how can we better protect ourselves?

Health

Thunderstorm-related asthma can occur in New Zealand.

Sabih, A, Russell, C, Chang, CL. (2020)

Respirology Case Reports, 8(7), e00655. <https://doi.org/10.1002/rcr2.655>

Thunderstorm asthma is induced by specific weather conditions causing breakdown and widespread distribution of allergens. Thunderstorm asthma had previously been considered unlikely to occur in New Zealand (NZ), given its local weather patterns. Storm events on 2 December 2017 led to increased asthma presentations at Waikato Hospital in Hamilton. Analyses of patient presentations led us to conclude that these presentations were similar to international descriptions of thunderstorm asthma. This is the first time such presentations have been reported in NZ. Documenting these events accurately is important as this is the first step to making a plan that would enable paramedics and emergency facilities across NZ to respond to any larger scale thunderstorm asthma events in the future. [Read more](#)

History

ON THIS DAY: September 8, 1900 — Nation's deadliest natural disaster occurs with 'Great Galveston Hurricane'

An estimated 8,000 people died on Galveston Island due to the storm; up to several thousand more casualties were on the mainland.

NB: A riveting account of the Galveston hurricane is written about in the book Isaac's storm. Available from the MetService library. Also google 'Galveston hurricane 1900' and click on 'images' to get some idea of the destruction wrought on the city.

Space weather

Why Millions Are Being Poured Into Space Weather Research

International Business Times

Space **weather** from a solar storm that impacts the Earth's magnetosphere can affect advanced **technology** including damages to orbiting spacecraft ...

Transport/roading/shipping/freight

U-Ming Marine and StormGeo announce expanded partnership

Hellenic Shipping News Worldwide

StormGeo, the leader in **weather** intelligence, **ship** routing and fleet performance management solutions, announced today an expanded partnership ..

Cyber security and IoT

What can NZ organisations learn from the recent cyber attacks?

A wave of cyberattacks exposed worrying vulnerabilities in some of the country's key institutions. What is our defence? National Correspondent Katie Kenny reports.

It was like groundhog day.

The NZX website is down, under fire from a cyberattack. Again.

Citizen science / crowd sourcing

Belfast citizen science project launch to include presentations, website demo

PenBayPilot.com

“By documenting **weather** and water levels, correlated with observed flooding and NWS predictions, the people of Belfast will get valuable insight into ...

Journal and articles online

Upper-tropospheric inflow layers in tropical cyclones

Shanghong Wang, Roger K. Smith, Michael T. Montgomery

Version of Record online: 26 August 2020

Three-dimensional numerical simulations of tropical cyclone intensification with sufficient vertical resolution have shown the development of a layer of strong inflow just beneath the upper-tropospheric outflow layer as well as, in some cases, a shallower layer of weaker inflow above the outflow layer. An example is shown in the figure. Here we provide an explanation for these inflow layers in the context of the prototype problem for tropical cyclone intensification, which considers the evolution of a vortex on an f-plane in a quiescent environment, starting from an initially symmetric, moist, cloud-free vortex over a warm ocean. We attribute the inflow layers to a subgradient radial force that exists through much of the upper troposphere beyond a certain radius. Some effects of the inflow layers on the storm structure are discussed.

Identifying the key challenges for fog and low stratus forecasting in complex terrain

Stephanie Westerhuis, Oliver Fuhrer, Jan Cermak, Werner Eugster

Forecasting fog and low stratus (FLS) poses a challenge for numerical weather prediction models. We compare FLS forecasts with satellite observations and conduct a series of sensitivity experiments for a case study with overly rapid FLS dissipation in the model. Model changes, which had been reported to improve FLS simulations in previous studies, have little impact. We show that the advection scheme's implicit numerical diffusion is the primary cause for erroneous FLS dissipation in complex terrain.

=====

Thanks to our regular contributors

=====