

New Zealand weather and climate news

Courtesy of MetService Library

MetService mentions

Tekapo coldest spot in New Zealand at -6.6C on Sunday

Tekapo was the chilliest spot in New Zealand at the weekend.

Snow fell heavily over the South Canterbury town on Saturday morning, pushing the overnight temperature to -6.6 degrees Celsius, with MetService meteorologist Andy Best labelling it “the coldest place around the country”.

Enormous high will bring both dry and wet weather

SunLive

Metservice advise that on Monday, an unsettled southwest flow should remain over New Zealand, but the freezing levels are expected to rise.

Weather: Cold, but mainly fine weather ahead - thanks to a big high

New Zealand Herald

MetService meteorologist Andy Best said however that the temperatures were normal for this time of the year, with only Christchurch and Kaikoura about ...

Snowfall and ice warnings for South Island after chilly night

RNZ

The MetService issued road snowfall warnings for several South Island roads yesterday. For Lewis Pass, a few snow showers are expected near the ...

Temperatures to drop as snow falls in NZ

SunLive

MetService is also forecasting snowfalls down to 900 metres for parts of the central South Island today, where snow may settle on the higher elevation ...

'Very chilly' start to the weekend as snow falls and temperatures plummet

A cold snap is blasting the country this weekend, causing frigid temperatures, snow, and road closures in the South Island.

In pics: New Zealand hit by winter weather as the big chill bites

Stuff.co.nz

MetService's National weather forecast for Thursday, June 4. A cold snap has hit the country today, and is going to dig its icy fingers in for the rest of the ...

Weather: Freezing temperatures in the south round out first week of winter

Winter has served up a chilling reminder that it's settled in for business.

Many in the south woke to freezing temperatures on Sunday morning, thanks to a cold front pushing chilly air up the South Island.

Your weather: Snow, severe frosts in the south round off first week of winter in the south

New Zealand Herald

MetService meteorologist Tuporo Masters predicted yesterday that people in the South would be "in the freezer" overnight with temperatures around ...

Snow expected for Canterbury as 'wintry' conditions set in

Stuff.co.nz

MetService issued a heavy rain watch for Southland for Thursday morning, with a cold front expected to bring heavy rain to many parts of the region.

'Take and umbrella and dress warm': Heavy rain, chance of thunderstorms ahead

Stuff.co.nz

MetService has issued a heavy rain watch for Southland for Thursday morning. A cold front is expected to bring heavy rain to many parts of the region.

Rain and snow coming for South

Otago Daily Times

A MetService spokesman said this afternoon although there was minimal risk of widespread severe weather during the weekend, it was likely that ...

Weekend downpours not enough to budge Auckland water shortage after dry start to year

TVNZ

MetService meteorologist Georgina Griffiths says another burst of rain is set to arrive tomorrow night, but it won't be as long-lived or as heavy as was ...

Has Auckland outgrown its water supply?

"You feel like you are staring into the frightening future - you've seen all the movies about viruses and zombies running out of buildings."

Why aren't we encouraging more rain water harvesting?

With water restrictions being placed on Auckland and Northland due to drought, should urban dwellers be storing rainwater for irrigation and non-potable use when the weather gets dry?

First the pestilence, then the flood - Coromandel farm park's post-lockdown reopening drenched

After one day back in business, a Coromandel farm park has been forced to close indefinitely due to flooding.

'Strawberry Moon' marks start of eclipse season

Kiwis will be treated to a sweet sight as the strawberry moon rises.

A strawberry moon - otherwise known as the Mead Moon, Rose Moon or Thunder Moon - is the name given to the full moon in June, the sixth of the year.

Northland and Auckland drought: Rain averts water crisis in Far North

While Auckland's water crisis is just beginning, drought-hit Far North communities have seen enough rain to drop the toughest water restrictions available.

Snow to 400m in parts of South tomorrow

Otago Daily Times

The MetService has issued road snowfall warnings for high country roads across the South for tomorrow morning and in Queenstown it has forecast ...

Fine and mild May for Whanganui

New Zealand Herald

The highest temperature recorded at Whanganui Airport was 22C on May 2, MetService meteorologist Mmathapelo Makgabutlane said. The May ...

MetOcean[LS1] [LS2] [LS3] [LS4] [LS5] [LS6] [LS7] [LS8] [LS9] (and oceanmet, marine weather etc)

Mega-project yields insights about NZ's changing oceans

New Zealand Herald

The Moana Project – a collaboration led by MetService's MetOcean Solutions - aims to make New Zealand a world leader in ocean-forecasting ...

Towable sensor free-falls to measure vertical slices of ocean conditions

Posted: 21 May 2020 01:12 PM PDT

Towable sensor free-falls to measure vertical slices of ocean conditions.

Offshore wind farm proponents warned surf breaks will be protected

Proponents of an idea to build massive offshore wind farms off the coast of Taranaki are being warned its internationally-renowned surf breaks will soon be protected and cannot be disturbed.

Mega-project yields insights about NZ's changing oceans

New Zealand Herald

... and Otago universities, Niwa, the Cawthron Institute, Seafood NZ, Deepwater Group, the Ministry for Primary Industries and regional councils.

New Navigation Charts Bring Economic And Maritime Safety Benefits To Tonga

Navy disaster relief vessels and other large ships will no longer rely on old fashioned plumb lines and charts measuring in fathoms to enter some of Tongas waters, as they have done since the 1800s. A partnership between Land Information New Zealand ...

WMO

Northern Hemisphere snow can now be reliably estimated

Posted:

For the first time, snow researchers from the Finnish Meteorological Institute in collaboration with Environment and Climate Change Canada have reliably estimated the amount and the trend in the...

Cyclone Amphan highlights the value of multi-hazard early warnings

Posted:

Accurate advance forecasts of tropical cyclone Amphan in India and Bangladesh underpinned a successful disaster mobilization campaign, including the evacuation of more than 3 million people, which...

Advances highlighted in climate risk early and warning systems

Posted:

As the world continue to manage the deadly Covid-19 virus and looks at ensuring that the recovery addresses climate change threats, the significance of advanced multi-hazard threat warnings and risk...

Global partnership urges stronger preparation for hot weather during COVID-19

Posted:

As the Northern hemisphere enters what is expected to be another record-breaking heat season, our network of health and climate experts have called for stronger preparation to keep people safe in hot...

Advancements in risk early warning systems recognized

Posted:

As the world continue to manage the deadly Covid-19 virus and looks at ensuring that the recovery addresses climate change threats, the significance of advanced multi-hazard threat warnings and risk...

Rapid mode data transmission by the MoES-NIOT Data buoy during the Cyclone Amphan in Bay of Bengal

Posted:

Under the Ministry of Earth Sciences (MoES), Government of India, the Ocean Observations Systems group of National Institute of Ocean Technology (NIOT), Chennai India established Moored buoy network...

Record CO2 levels and temperatures highlight need for action on World Environment Day

Posted:

As the global community comes together to celebrate World Environment Day, important new data shows that the causes and indicators of climate change have reached new heights. May 2020 was the warmest...

ECMWF

France applies to host top weather forecaster now based in UK

straitstimes (press release)

The ECMWF will be relocating some of its teams and their families to European Union territory, and France is proposing to move them to the southern ...

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

We dug up Australian weather records back to 1838 and found snow is falling less often

As we slowly emerge from lockdown, local adventures are high on people's wish lists. You may be planning a trip to the ski fields, or even the nearby hills to revel in the white stuff that occasionally falls around our southern cities after an icy winter blast.

Extreme weather (and other news) – Americas and Europe

Climate change will bring bigger swings in European summer temperatures

Posted: 18 May 2020 11:49 AM PDT

Global average temperatures are set to increase under climate change, but temperature deviations in relation to this average will not be affected in the same way. Instead, hotter or colder deviations will become more or less likely in different regions in different seasons. This study fills in some of the gaps about how climate change will affect summer and winter temperatures in the northern hemisphere.

Rare derecho kills 4, cuts power to more than half of a million people in mid-Atlantic

AccuWeather.com

“The storms raced across Pennsylvania and New Jersey, moving eastward at over 80 mph at times,” AccuWeather Meteorologist Brian Thompson said ...

International news and research

[How Do Meteorologists Predict Weather Patterns?](#)

World Atlas

The computer models, known as forecasting models, are made up of millions of different observations from radar maps and satellites. Meteorologists ...

[ITCZ shift and extratropical teleconnections drive ENSO response to volcanic eruptions](#)

[Science Advances](#)

The El Niño–Southern Oscillation (ENSO) phenomenon arises spontaneously from the coupling between the atmosphere and the ocean in the tropical ...

[Antarctic ice sheets capable of retreating up to 50 meters per day](#)

Posted: 28 May 2020 01:05 PM PDT

The ice shelves surrounding the Antarctic coastline retreated at speeds of up to 50 meters per day at the end of the last Ice Age, far more rapid than the satellite-derived retreat rates observed today, new research has found.

[Cyclones can damage even distant reefs](#)

Posted: 27 May 2020 09:33 AM PDT

Big and strong cyclones can harm coral reefs as far as 1000 kilometers away from their paths, new research shows. A new study sounds a warning about the way strong cyclone winds build extreme seas that affect coral reefs in Australia and around the world.

[Today's atmospheric carbon dioxide levels greater than 23 million-year record](#)

Posted: 01 Jun 2020 04:41 PM PDT

A common message in use to convey the seriousness of climate change to the public is: 'Carbon dioxide levels are higher today than they have been for the past one million years!' This new

study used a novel method to conclude that today's carbon dioxide (CO₂) levels are actually higher than they have been for the past 23 million years.

Climate change could dramatically reduce future US snowstorms

Posted: 02 Jun 2020 09:26 AM PDT

A new study suggests American winters late this century could experience significant decreases in the frequency, intensity and size of snowstorms. Under an unabated greenhouse gas emissions scenario, the study projects 28% fewer snowstorms on average per year over central and eastern portions of North America by the century's last decade.

Latest climate models show more intense droughts to come

Posted: 02 Jun 2020 08:01 AM PDT

An analysis of new climate model projections shows southwestern Australia and parts of southern Australia will see longer and more intense droughts due to a lack of rainfall caused by climate change. But Australia is not alone. Across the globe, several important agricultural and forested regions in the Amazon, Mediterranean and southern Africa can expect more frequent and intense rainfall droughts.

ASEAN issues forecast for summer monsoon season

Posted:

The ASEAN Climate Outlook Forum has issued its seasonal forecast for the summer monsoon season, June-July-August 2020 over Southeast Asia, taking into account the possible influence of the El Niño...

New tool helps Africa's weather forecasters to save lives

The Voice Online (blog)

WEATHER FORECASTERS in Africa are getting access to satellite data that will allow them to track the path and severity of developing storms – and ..

Air quality / air pollution

Air quality monitoring hits top gear in Central Otago town

Air quality sensors have been set up every 100 metres in Arrowtown, in what is believed to be the world's densest air monitoring network.

Atmospheric scientists identify cleanest air on Earth in first-of-its-kind study

Posted: 01 Jun 2020 04:41 PM PDT

A research group has identified an atmospheric region unchanged by human-related activities in the first study to measure bioaerosol composition of the Southern Ocean south of 40 degrees south latitude

Aviation

Money problems add to Civil Aviation Authority's woes

Financial worries are adding to the pressure on the Civil Aviation Authority - still reeling from a scathing report on its dysfunctional internal culture made public yesterday.

Air NZ losing \$5m a day, bracing for more job cuts - chief exec

Jun 05, 2020 08:44 pm

Air New Zealand is losing \$5 million a day and is bracing for potentially more job losses saying it needs to slash \$150 million more from its wage bill.

Coronavirus: Singapore Airlines to resume New Zealand services

Singapore Airlines has announced it will resume scheduled passenger services to Auckland and Christchurch from Tuesday, June 9.

Coronavirus: Jetstar planning return of NZ domestic services following months of hibernation

A restart of Jetstar's New Zealand domestic operation looks to be imminent with pilots preparing to return to work and cut-price airfares on sale from July 1.

Dash-8 down: Ansett crash remembered 25 years on

Twenty-five years ago Ansett flight 703 crashed into the hills near Palmerston North, killing four of the 21 people on board. Jimmy Ellingham reports.

As Asia's tropical storm season arrives, grounded airplanes at risk of damage

WTVB News

SYDNEY/TAIPEI (Reuters) - Airlines, airports and insurers across Asia are bracing ...
"Extreme weather events such as hurricanes, typhoons and cyclones are a ...
Taiwan's aviation regulator said it had asked airports to hold typhoon ...

Australian aviation after COVID-19

The McKell Institute

2 Jun 2020 | Report | Economics

This report outlines the principles that should govern an Australian aviation plan to help the industry move towards a more prosperous future that delivers competitive transportation options for the Australian public.

Climate change / global warming

Planning for climate change amid the pandemic recovery

The traffic stopped, birds sang, and people stayed home - was the coronavirus lockdown a climate-fighting miracle?

For five weeks life was put on hold, and air pollution around the country dropped to levels seen only on Christmas and New Year's Day.

Westport's 'sleeping giant' - a town with a century to move away from the Buller River

On a calm day, Westport's Buller River is one of the West Coast's scenic gems, home to a busy council-owned fishing port and famous for its abundant whitebait.

Washington Post wins Pulitzer for climate change series

The newspaper's '2C: Beyond the Limit' series earns the coveted prize for explanatory journalism.

After the Virus: The Environment

Covid-19 has shrunk the 10 years the world had to address climate change to no more than 18 months, according to the United Nations lead negotiator for the Paris Agreement.

Communications/social media

Celebrating 60 years of NZ TV: 'It's very rarely seen footage'

No footage exists of television's arrival in Aotearoa 60 years ago - but there is a wealth of material to honour the role it has played in the country's history, the curator of a new exhibition says.

'Weather World' wins statewide awards for hurricane series, forecasting

Penn State News

... of storm surge, the pilots who brave the skies to study hurricanes and historical hurricane data across Pennsylvania. ... forecasting and prediction are sought out by other weather forecasting divisions around the world,” Lydick said.

Covid-19 / Business

Coronavirus to deliver a sharp shock to the New Zealand economy - Quarterly Predictions, June 2020

Embargoed until 1am, Wednesday 27 May 2020
NZIER Quarterly Predictions, June 2020

NZIER forecasts that the New Zealand economy will recover unevenly from the effects of the COVID-19 outbreak. We expect the decline in activity will be concentrated in the June 2020 quarter, largely reflecting the direct impact of containment measures. Despite a forecast bounce-back in activity from the June 2020 quarter low, NZIER expects activity to remain below levels forecast in the absence of the outbreak, as weaker consumer and business confidence weigh on spending.

Four-day work week: A silver bullet for New Zealand's economy post-COVID-19 or an idealist fantasy?

As New Zealand recovers from the economic carnage wreaked by COVID-19, employers are grappling with the way forward for the business and their employees.

Partnerships for recovery: Australia's COVID-19 development response

Government of Australia

29 May 2020 | Strategy | Health, International relations

The Australian government's Partnerships for Recovery policy presents Australia's priorities in working globally, and especially with our near neighbours, to minimise the impact of the COVID-19 pandemic.

Wellington well placed to weather the Covid storm

Stuff.co.nz

And with our subsidiary Creative HQ, we've launched Thrive, a workshop-based programme to better enable businesses adapt to the new business ...

Covid-19 / Wellbeing

Move to 'real world' will cause anxiety for some - psychologist

Mental health workers are bracing for a surge in anxiety cases under alert level 1, as people feel distressed by the return to a more hectic world after the calm of the previous levels.

Covid 19 coronavirus: 95% likely virus has been eliminated in New Zealand, modelling shows

There is a 95 per cent probability that Covid-19 has been eliminated in New Zealand, new modelling by researchers has found.

Coronavirus: Winter, the border and masks of concern as Covid-19 level 1 looms

Under coronavirus alert level 1 "all restrictions essentially go except for the border", the prime minister says, but there are concerns the number of people coming into the country will rise increasing the risk of a Covid-19 outbreak.

El Nino / La Nina

Philippine volcanic eruption could prompt El Nino warming next winter

Phys.Org

They reckon there is a high likelihood (83% probability) of an El Niño-like warming event during the 2020/21 winter if the magnitude of the Taal eruption ...

Energy and Mining

Why Australia's vast coastline could become the next big renewable energy resource

SBS

A new Australian-developed system is to begin generating electricity from ocean waves later this year, with a report showing three-quarters of ...

Majority of energy executives believe climate change threatens grid operations

Energy Magazine

Utility executives said their top-ranked weather concerns for network ... "What are the best technologies to protect employees' health on the job, such ...

Health

Warmer temperatures slow COVID-19 transmission, but not by much

Posted: 01 Jun 2020 10:46 AM PDT

Researchers looked at the impact of temperature, precipitation, and UV index on COVID-19 case rates in the United States during the spring months of 2020. The findings reveal that while the rate of COVID-19 incidence does decrease with warmer temperatures up until 52 degrees F, further warmer temperatures do not decrease disease transmission significantly.

COVID-19 could be a seasonal illness with higher risk in winter

Posted: 01 Jun 2020 10:46 AM PDT

A study conducted in Sydney, Australia, during the early epidemic stage of COVID-19 has found an association between lower humidity and an increase in locally acquired positive cases. Researchers discovered a 1 percent decrease in humidity could increase the number of COVID-19 cases by 6 percent

The Seasonality Issue: Wishful Thinking for SARS-CoV-2?

We are used to the seasonal nature of influenza virus infection. In the northern hemisphere, we expect to see cases emerge in October, surge in the winter months, and begin to tail off in April.¹ Many generalizations have been made comparing influenza virus and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), so it has been tempting to think of SARS-CoV-2 as a seasonal infection too. However, we do not yet know if SARS-CoV-2 will behave in a seasonal way.

Melting ice opens doors for wider spread of contaminants, diseases

New pathways and new and more distant places are leading to additional scientific findings on impacts of melting Arctic ice.

Lightning

New partnership in lightning protection

Swinburne University of Technology

This makes the project part of Australia's premier manufacturing research and development centre, focussing on delivering outcomes for Australian ...

Southern Oregon meteorologists use data to study lightning behavior

Mail Tribune

Lightning tells a story, and two Rogue Valley meteorologists have been working to decipher it. And they may have a decent guess on what it will say ...

Outdoor recreation

South Canterbury ski area operators anticipating strong season

Heavy snowfall on Thursday will be the icing on the cake for South Canterbury's ski area operators, who are reporting strong sales in the lead up to the season.

Tourism

Fiordland re-directs focus to domestic market

Fiordland's regional tourism organisation is repositioning itself to attract more New Zealanders to visit.

Transport/roading/shipping/freight

Driver seriously injured after crash on black ice in Christchurch

A man is in a serious condition in hospital after his car crashed near the entrance to Christchurch's Lyttelton road tunnel.

Drought weather drives roads to 'shrink' in rural Waikato

Bumps, cracks and ruts have started to appear on rural roads as a spin-off effect of the country's lingering drought conditions.

From driving in jandals to smoking, 2.7 million Kiwis driving dangerously

From driving in jandals, to smoking, to shaving, 2.7 million New Zealanders engage in some risky behaviour while behind the wheel, a survey has found.

Why is Transmission Gully such a troubled project?

The first shovels broke dirt on the planned Transmission Gully Motorway in 2014.

But nearly six years later, the project creating an inland route connecting north Wellington to the Kapiti Coast is flailing.

NZTA looks to 'plan B' for Transmission Gully

The New Zealand Transport Agency appears to be planning for a future where Transmission Gully could go ahead with a different set of builders

Mitsui OSK charts course to remote ship navigation with big data

Nikkei Asian Review

could analyze volumes of real-time weather and ocean data to plot routes that optimize safety and fuel efficiency. Japanese marine shipping companies ...

Innovation and technologies and AI

How About Letting AI Take Care of Weather Forecasting?

Synced

With AI models gaining power and momentum across a number of industries in recent years, meteorological researchers are now applying the tech in ...

Weather and road surface state data added to autonomous vehicle platform

International Environmental Technology

CAVs will receive prevailing and predicted road weather conditions from multiple sources, including reference grade stationary sensors, mobile road ...

Innovation in Severe Weather and Wildfire Alerting

Transmission & Distribution World

This paper outlines the issues severe weather and wildfires create that impact the utility business and how to alleviate them.

Internet of Things embarks on promising trajectory with new top team appointed

Proactive Investors Australia

... and has created mobile road weather sensors and road weather products; Malcolm Rook – the chief innovation officer of AI Labs and a developer of ...

Smart windows that self-illuminate on rainy days

Posted: 29 May 2020 12:07 PM PDT

A research team develops self-powering, color-changing humidity sensors. Applicable to various fields including smart windows, health care and safety management.

[Viral Windy App Allows Users To LIVE Track Nisarga Cyclone's Pathway; Know Details](#)

Republic World

Windy App will let you see the pathway of Nisarga Cyclone and it is considered to be one of the most effective weather forecasting portals. Read more.

[Farmers Edge launches severe weather detection, reporting tool](#)

AGDAILY

Detection: Powered by a sophisticated severe weather monitoring system and Farmers Edge Advanced Weather Network of on-farm stations, ...

[Journal and articles online](#)

[Summertime cloud phase strongly influences surface melting on the Larsen C ice shelf, Antarctica](#)

E. Gilbert, A. Orr, J. C. King, I. A. Renfrew, T. Lachlan-Cope, P. F. Field, I. A. Boutle

Pages: 1575-1589 | First Published: 30 January 2020

Model representation of the phase of summertime clouds on the Antarctic Peninsula, like those shown in the image, influences the modelled surface radiative fluxes, and consequently melting, over the Larsen C ice shelf. A modified configuration of the UK Met Office Unified Model improves the parametrization of cloud and reduces biases in melting compared to previous versions and published studies. Better simulated melt rates will enhance understanding of ice shelf surface mass balance, and consequently sea level rise.

[NowPrecip: localized precipitation nowcasting in the complex terrain of Switzerland](#)

I. V. Sideris, L. Foresti, D. Nerini, U. Germann

Pages: 1768-1800 | First Published: 14 February 2020

NowPrecip is a new, probabilistic, area-tracking precipitation nowcasting system. It relies on three pillars: (a) a new geostatistics-based optical flow algorithm, (b) a localized architecture able to transform the local properties without altering the rest of the terrain significantly, and (c) techniques to incorporate localized growth and decay into the computation of nowcasts, based on information from numerical weather prediction (NWP). NowPrecip is ensemble-based and

incorporates merging with the available NWP to provide a seamless nowcast for several hours into the future.

A weather system perspective on winter–spring rainfall variability in southeastern Australia during El Niño

Seraphine Hauser, Christian M. Grams, Michael J. Reeder, Shayne McGregor, Andreas H. Fink, Julian F. Quinting

Version of Record online: 17 May 2020

During El Niño, southeastern Australia typically experiences on average dry conditions. However, rainfall anomalies vary considerably from month to month. This study elucidates the contribution of synoptic-scale weather systems to this variability using a novel dataset of objectively identified weather systems. We find that a substantial fraction of the monthly rainfall variability during El Niño is related to frequency modulations of synoptic-scale weather systems, in particular of cut-off lows, warm conveyor belts, and blocking anticyclones.

Tara Pacific Expedition’s Atmospheric Measurements of Marine Aerosols across the Atlantic and Pacific Oceans: Overview and Preliminary Results

Bulletin of the American Meteorological Society Vol. 101, No. 5, May 2020

Marine aerosols play a significant role in the global radiative budget, in clouds’ processes, and in the chemistry of the marine atmosphere. There is a critical need to better understand their production mechanisms, composition, chemical properties, and the contribution of ocean-derived biogenic matter to their mass and number concentration. Here we present an overview of a new dataset of in situ measurements of marine aerosols conducted over the 2.5-yr Tara Pacific Expedition over 110,000 km across the Atlantic and Pacific Oceans. Preliminary results are presented here to describe the new dataset that will be built using this novel set of measurements. It will characterize marine aerosols properties in detail and will open a new window to study the marine aerosol link to the water properties and environmental conditions.

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John Maunder’s Weather Eye

<https://www.sunlive.co.nz/blogs/14764-tauranga-average-afternoon-temperatures-may-2020.html>

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Thanks to our regular contributors

