

New Zealand weather and climate news

Courtesy of MetService Library

MetService mentions

South Island weather: Christchurch smashes record for hottest January day

New Zealand Herald

According to MetService, the mercury nudged into 36.1C for the garden city on Tuesday. The previous record for January was 35.9C set in 1979.

Otago swelters, with highest temps on coast

Otago Daily Times

A MetService spokeswoman said the highest temperature recorded in Otago and Southland was 33.8degC in Dunedin City, between 4pm and 5pm.

Canterbury cooks

Otago Daily Times

A Metservice meteorologist said although the forecaster's thermometers are only registering temperatures in the late 30s, reports as high as 40C are ...

Canterbury towns hit record temperatures, sweltering in summer sun

TVNZ

According to MetService, Ashburton recorded a 39 degree celsius temperature at Ashburton Airport, while Timaru hit 37.5 degrees Celsius. Timaru's ...

South Burning Island: temperatures close to 40 ° C in Canterbury

theinformant.co.nz

Metservice meteorologist said that although predictor thermometers only record temperatures in the late 1930s, reports as high as 40 ° C are not ...

South Island scorcher: Temperatures approaching 40C in Canterbury

New Zealand Herald

MetService meteorologist Lewis Ferris said although the forecaster's thermometers are only registering temperatures in the late 30s, reports as high as ...

Weather: Timaru breaks five-year record with 'peak heat' 37.5C day

Stuff.co.nz

... conditions like this in January was back in 2015, when Timaru Airport reached 36.4C, MetService communications meteorologist Lewis Ferris said.

NZ's weird summer: Drought in the north, drenched in the south

January may go down as one of the weirdest months on the weather books, with a feast-or-famine rainfall picture that's left the south saturated - and the far north again in severe drought.

MetOcean

Sea temperature rise over the period 2002–2020 in Pelorus Sound, New Zealand – with possible implications for the aquaculture industry,

Niall Broekhuizen, David R. Plew, Matt. H. Pinkerton & Mark. G. Gall (2021)

New Zealand Journal of Marine and Freshwater Research, DOI:
[10.1080/00288330.2020.1868539](https://doi.org/10.1080/00288330.2020.1868539)

We assembled water-temperature data (1.0–15 m depth horizon) from several field studies (spanning 2003–2020) within Pelorus Sound to generate composite time-series of temperature at four locations. We also examined satellite-sensed sea-surface temperature records for the region (2002–2019). Time-series were deseasoned and Sen-slopes were calculated as measures of long-term trend. All of the *in-situ* slopes and most of the satellite slopes fell inside the range 0.2–0.4°C decade⁻¹. Within the *in-situ* data, warming appears to have been less rapid during the spring (September–November) quarter than in others. In the satellite data, warming was slower during both the winter and spring quarters. The satellite data indicate that warming has been less rapid inside the Sound than the nearby oceanic waters. Air temperatures inside the Sound have warmed at a rate similar to the nearby water (and a lesser rate than the oceanic ones) and riverine heat inputs have not changed appreciably. We infer that warming has been driven mainly by import of warming oceanic waters. We discuss the implications of future warming for the two marine crops grown in Pelorus Sound (Chinook salmon and Greenshell™ mussel) drawing upon literature concerning their responses to temperature.

WMO

Step up climate change adaptation, says UN report

Posted:

As temperatures rise and climate change impacts intensify, nations must urgently step up action to adapt to the new climate reality or face serious costs, damages and losses, a new UN Environment...

2020 was one of three warmest years on record

Posted:

Cooling La Niña event failed to tame the global heat Geneva, 14 January 2021 - The year 2020 was one of the three warmest on record, and rivalled 2016 for the top spot, according to a consolidation...

Round-the-world yacht race supports ocean science

Posted:

A round-the-world ocean yacht race, which has brought together skippers and scientists to support ocean observations, is nearing its climax. Ten of the skippers in the Vendée Globe race, which set...

WMO head is named European of the Year by Readers Digest

Posted:

World Meteorological Organization Secretary-General Professor Petteri Taalas has been named “European of the Year” by Readers Digest magazine for his role in galvanizing action on climate...

Tropical Cyclone Eloise hits Mozambique

Posted:

Tropical Cyclone Eloise made landfall early morning on 23 January near Mozambique's city of Beira, causing widespread damage and flooding on a long swathe of coastline and impacting an area still...

USA will rejoin Paris Agreement

Posted:

The World Meteorological Organization has joined the international community in welcoming the announcement by President Joe Biden that the United States of America will re-enter the Paris Agreement...

WMO supports healthy, sustainable, resilient cities

Posted:

A preparatory webinar for the 16th Global Forum on Human Settlements was held on January 15, 2021. Its theme was “International Green Model City Initiative: Call for Stronger Actions Towards Healthy,...

Factors behind the heavy snowfall and low temperatures in Japan from mid-December 2020 onward and weather outlook - Japan Meteorological Agency

Posted:

Japan experienced a series of heavy snowfall events from mid-December 2020 onward, especially the Sea of Japan side of the country. The snowfall amounts were record-breaking in some places. One of...

ECMWF

Climate Quants Tune Into AI to Build Better **Weather** Report

Bloomberg

The European Centre for Medium-Range **Weather** Forecasts is turning to ... and utilities who rely on ECMWF forecasts to make **business** decisions.

Extreme weather (and other news) – Antarctica and offshore

Antarctica: The ocean cools at the surface but warms up at depth

Posted: 21 Jan 2021 10:18 AM PST

Scientists have concluded that the slight cooling observed at the surface of the Southern Ocean hides a rapid and marked warming of the waters, to a depth of up to 800 meters. These results were obtained thanks to unique data acquired over the past 25 years.

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

Heat to peak as Sydney experiences hottest spell in a decade

The Age

“This is day five of a pretty significant hot spell and the heat is peaking today,” **Weatherzone** meteorologist Brett Dutschke said. People flocked to Bondi ...

International news and research

Climate change will alter the position of the Earth's tropical rain belt

Researchers describe future changes to the tropical rain belt with expected climate change. The changes will cause droughts in large sections of the globe, threatening biodiversity and food security.

Nuclear war could trigger big El Niño and decrease seafood

Posted: 25 Jan 2021 06:43 AM PST

A nuclear war could trigger an unprecedented El Niño-like warming episode in the equatorial Pacific Ocean, slashing algal populations by 40 percent and likely lowering the fish catch, according to a new study. The research shows that turning to the oceans for food if land-based farming fails after a nuclear war is unlikely to be a successful strategy - at least in the equatorial Pacific.

Storm damage worsens in a warming world, hiking pressure to adapt

A climate risk index warns that vulnerable countries are being hit harder by powerful storms, as leaders gather at a summit to push greater adaptation efforts

Nearly 500000 killed by extreme weather disasters in 20 years

Aljazeera.com

... vulnerable countries face particularly great challenges in dealing with the consequences of extreme **weather** events,” said **co**-author David Eckstein.

World hammered by record 50 billion-dollar weather disasters in 2020

Costly thunderstorms, hurricanes, wildfires, and devastating monsoon rains besieged the planet last year.

Aviation

Internet signal-carrying weather balloon firm Loon to shut down

Aberdeen Evening Express

In a blog post, Loon chief executive Alastair Westgarth said that despite progress with the technology behind the balloons, the firm had been unable to ...

Climate change puts hundreds of coastal airports at risk of flooding

Posted: 21 Jan 2021 10:17 AM PST

Scientists have found that 269 airports are at risk of coastal flooding now. A temperature rise of 2C - consistent with the Paris Agreement - would lead to 100 airports being below mean sea level and 364 airports at risk of flooding. If global mean temperature rise exceeds this then as many as 572 airports will be at risk by 2100, leading to major disruptions without appropriate adaptation.

Turbulence model could help design aircraft capable of handling extreme scenarios

Posted: 21 Jan 2021 10:17 AM PST

To help build aircraft that can better handle violent turbulence, researchers developed a new model that allows engineers to incorporate the physics of an entire vortex collision into their design codes.

Business/Insurance

Aon: “Climate-influenced” weather key driver of catastrophic damage

Insurance Business New Zealand

... on other systemic risks – particularly climate change – and is causing a fundamental reordering of business priorities,” said Aon CEO Greg Case.

Aon finds climate-influenced weather is key driver of \$268B global damage from 2020 natural ...

PRNewswire

Of this total, private sector and government-sponsored insurance programs covered USD97 billion, creating a protection gap of 64%, which is the ...

Severe **weather: 2020 ranked as 4th most expensive year for **insurance** damage**

Globalnews.ca

“Taxpayers and **insurers** share the cost for severe **weather** damage,” reads part of the report. “For every dollar paid in **insurance** claims for damaged ...

Clouds

Tiny particles that seed clouds can form from trace gases over open sea

Posted: 22 Jan 2021 11:06 AM PST

New results from an atmospheric study over the Eastern North Atlantic reveal that tiny aerosol particles that seed the formation of clouds can form out of next to nothingness over the open ocean. The findings will improve how aerosols and clouds are represented in models that describe Earth's climate so scientists can understand how the particles -- and the processes that control them -- might have affected the planet's past and present, and make better predictions about the future.

Fire

Fire danger running high in upper north amid oddball La Nina

Wildfire risk across the upper north and East Coast is running high, despite the presence of a La Nina climate system that usually dampens down the danger.

Extreme fire weather

Posted: 14 Jan 2021 03:06 PM PST

When the Thomas Fire raged through Ventura and Santa Barbara counties in December 2017, an earth science researcher was stunned by its severity. Burning for more than a month and scorching 440 square miles, the fire was then considered the worst in California's history.

Health

New Zealand needs to start taking extreme heat seriously

OPINION: As the mercury climbed to dangerously high levels on Tuesday, the collective response to forecast temperatures in the mid-30s was one of joy: a great day to get out and enjoy the sunshine.

Insurance firm offers mental health support as UK flood risk surges

'A mental health crisis is looming' as depression and anxiety over flood losses increases, Zurich UK official says

Innovation, Technologies and AI

The future of weather forecasting is in your back pocket.

Verizon Communications

“Virtually every **weather company** in the world has access to the same data,” Joel says. “Most of it is funded by our tax dollars and tax dollars around ...

Marketing

For him it rains, for her it pours: how weather affects our consumption

Marketers and business managers benefit from knowing why weather may be associated with increased consumption and how this process may differ across men and women.

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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.

A new way to forecast beach water quality

Phys.org - January 22, 2021

Less than two days of water quality sampling at local beaches may be all that's needed to reduce illnesses among millions of beachgoers every year due to contaminated water, according to new Stanford research.

SpaceX Creates New Record, Launches 143 Satellites Via Ridesharing Mission

The Weather Channel - January 24, 2021

Much like ridesharing via Uber on Earth, Elon Musk-run SpaceX has successfully launched its new cost-cutting rideshare mission with 143 small satellites—a new record for a single rocket—into space.

Wetter weather affects composition, numbers of tiny estuarial phytoplankton

EurekAlert! - January 25, 2021

Research from North Carolina State University shows that extreme weather events, such as hurricanes and increased precipitation, affect both the amount and the composition of picophytoplankton in the Neuse River Estuary.

Rocks show Mars once felt like Iceland

ScienceDaily - January 21, 2021

A comparison of chemical and climate weathering of sedimentary rock in Mars' Gale Crater indicate the region's mean temperature billions of years ago was akin to current conditions on Iceland.

480,000 people killed by extreme weather in last 20 years, analysis shows

CBS News - January 25, 2021

Almost half a million people have died in natural disasters linked to extreme weather events in the last 20 years, according to a new assessment of the direct threat posed to humanity by climate change.

Scientists learn more about thundersnow from satellite imagery

ABC News - January 24, 2021

New research links cloud top appearance to lightning during a snowstorm.

President Biden Rejoins Paris Climate Agreement; Here's Why That Matters

The Weather Channel - January 20, 2021

The U.S. is rejoining the Paris climate agreement, a signal of newly elected President Joe Biden's commitment to international efforts to curb global warming.

What a 'wrecked' polar vortex means for winter-starved Americans

The Washington Post - January 19, 2021

It's been an easy winter on the East Coast, but that's not guaranteed to continue.

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Weather Eye with John Maunder

www.sunlive.co.nz/blogs/15298-tropospheric-temperatures-january-1979-to-december-2020.html

www.sunlive.co.nz/blogs/15280-tauranga-average-afternoon-temperatures-2020.html

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