

New Zealand weather and climate news

Courtesy of MetService Library

MetService clips

James Renwick, climate detective

Perfume opened James Renwick's mind to the power of deciphering science.

An enthusiastic headmaster stood in front of his primary school class in the tiny Canterbury railway town of Springfield and popped the stopper of a scent bottle. Raise your hand when you smell it, he told the kids. A slow-mo Mexican wave travelled the classroom from front to back

Heavy rain warning for West Coast

Stuff.co.nz

MetService meteorologist Angus Hines said a slow moving front is bringing heavy rain to the West Coast on Wednesday and Thursday, before moving ...

32.2 degrees! Roads melt, fires burn as heatwave hits Hawke's Bay

New Zealand Herald

The calls came about the time Hawke's Bay was experience some of the hottest temperatures in the country, with national weather agency MetService ...

Enjoy it while it lasts: Record-breaking temperatures set to cool off by week's end

Stuff.co.nz

"The general trend is for things to cool down as we move into the week [but] there will still be some warm temperatures," MetService meteorologist ...

Mt Ruapehu 2019 ski season hampered by poor weather conditions

Challenging weather conditions put a dampener on this year's ski season on Mt Ruapehu.

Mother Nature turned on storms, wind and icy conditions throughout the season, resulting in 6140 hours of paid de-icing being needed on the ski fields.

Balmy weather won't last until next weekend

Stuff.co.nz

... South Island tomorrow which will drop temperatures and actually bring some rain to a lot of areas," metService meteorologist Tahlia Carbtree said.

Rotorua weather man records over 30C temperature reading

New Zealand Herald

MetService Meteorologist Claire Nickson said different temperature readings across cities came down to a range of factors. The temperature gauge in ...

Unseasonably warm temperatures along east coasts of both islands

RNZ

MetService meteorologist Andy Best said, with a month to go until summer, it had been an unseasonably warm weekend. "We're still in spring and so it ...

Much of NZ in for a scorching Sunday with temps soaring into the 30s

Stuff.co.nz

MetService meteorologist Andy Best said much of the country was in for a hot day, and we had Australia to thank for it. An area of high pressure in the ...

Scorcher spring temperatures across the country

New Zealand Herald

The hottest place in the country today was Kawerau in the Bay of Plenty, with temperatures rising to 34.5C as of 3pm this afternoon, MetService ...

Christchurch residents flock to beaches as temperatures soar

Stuff.co.nz

MetService meteorologist Andrew James said Christchurch Airport reached 31.6C on Sunday afternoon, but it was cooler in Auckland (18.4C) and

MetService loses its head over Halloween

Stuff.co.nz

MetService's latest video forecast not only gives trick-or-treaters insight into Thursday evening's weather, but plays host to all manner of green screen ...

'Ridiculously hot and dry' start to November

Otago Daily Times

Get ready for a 'ridiculously hot and dry' start to November with two days of hot temperatures and sunshine. According to the MetService, Christchurch

Why warm air from Australia means soaring weekend temperatures for many

Stuff.co.nz

MetService meteorologist Peter Little said the warm air originated from Australia and was being transported across the Tasman Sea around the edges

NIWA

Another balmy summer coming - but first, a weekend scorcher

A forecaster is picking a scorching start to November, ahead of a summer season likely to lean toward the warmer side of normal.

November heat spiked unusually early this year - meteorologist

RNZ

November heat spiked unusually early this year - meteorologist ... NIWA meteorologist Chris Brandolino said it was unusual to have such a spike in ...

Climate Lessons: How global warming affects New Zealand's wind and rain

In Climate Lessons, a scientist explains what their research has taught them about climate change.

We live on a collection of islands that straddle the cool waters of the Southern Ocean and the warmth of the subtropical Pacific - stretching all the way from the warm beaches of Northland to the rugged and windswept beauty of Stewart Island, with large mountain ranges running down the spines of both Te Ika a Maui and Te Wai Pounamu. This stark combination of geography and topography has a significant influence on how we experience the present impacts of climate change, and what we can expect into the future.

WMO

Mountain summit issues call for action on climate change

A High Mountain Summit has issued a Call for Action in the face of rapid melting of the Earth's frozen peaks and the consequences for food, water and human security, as well as for ecosystems, the...

ECMWF

Progress and Challenges for the Use of Deep Learning to Improve Weather Forecasts

insideHPC

Peter Dueben is a Royal Society University Research Fellow at the European Centre for Medium-Range Weather Forecasts (ECMWF).

Volcano alert/watch

Rising SO₂ gas output, volcanic tremor at White Island could suggest eruptive activity more likely

Sulphur dioxide gas output and volcanic tremor levels at Whakaari/White Island are at the highest levels since 2016, possibly suggesting the volcano is entering a period where an eruption is more likely.

Vanuatu's Yasur volcano still unstable

Vanuatu's Yasur volcano continues to be unstable, consistent with the level 2 volcanic alert that the country's geohazard authorities have applied to it.

What will the next Taranaki eruption look like?

Mt Taranaki's next blow may be a moderate-sized event like recent bangs - or something else entirely if its "unusually long" slumber gives way to a new eruptive era.

Strange cloud formation alerts many of Mt Taranaki eruption

An unusual plume of cloud drifting from the summit of Mt Taranaki had many residents thinking the mountain had erupted for the first time in more than 200 years.

Ring of fire: a deep dive into New Zealand's volcanic risks

New Zealand is no stranger to natural hazards, having suffered more than its fair share of storms, earthquakes, floods and landslides over the past few decades. But one risk that has seemed fairly distant to most is volcanic eruptions, with many forgetting that New Zealand is a country built almost entirely out of land pushed out of the sea by erupting volcanoes.

Extreme weather (and other news) – Australia and Pacific

Weather stations a game changer

The West Australian

Stirlings to Coast Farmers is testing new weather stations equipped with ... two smart farms have been created in the region to test a wide range of technologies. The weather stations transmit data to the internet so it can be accessed ...

Australia's Bureau of Meteorology and IFRC will jointly chair Pacific climate services panel

ReliefWeb

A version of this story first appeared on the website of the Pacific Meteorological Desk Partnership last Tuesday.) Forging stronger relationships ...

Super Typhoon Halong is among the strongest storms ever observed by satellite

Super Typhoon Halong is raging in the open waters of the western tropical Pacific Ocean right now, with satellite imagery estimating its peak winds at close to 305kmh. It's every bit a Category 5 storm and then some, its extreme strength coming just three days after it drifted lazily as a tropical depression. Halong isn't moving toward land, but its mesmerising fury and terrifying beauty is capturing the attention of meteorologists worldwide.

ADB gives Tuvalu solar energy grant

The Asian Development Bank has approved a \$US6 million grant to Tuvalu for renewable energy.

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

Monsoon floods expected to worsen this year

EdgeProp.my

CYBERJAYA (Nov 1): The northeast monsoon is expected to bring more severe floods this year, said Malaysian Meteorological Department ...

Wet weather to continue in first half of November: Met Service

CNA

SINGAPORE: Singapore will see more wet weather in the next two weeks, along with a few slightly hazy mornings, the Meteorological Service ...

Oman weather: Rare back-to-back cyclones formed in the Arabian Sea

Times of Oman

Oman weather: Rare back-to-back cyclones formed in the Arabian Sea a statement from Sohar Municipality, and the Ministry of Transport added, ...

Extreme weather (and other news) – Americas and Europe

NASA Tracks Diablo Winds Powering Massive Kincade Wildfire in California

Gusting winds in northern California are helping the spread of the Kincade fire, as shown in a new animation from NASA. Meanwhile, Maxar Technologies captured infrared images the fire using its suite of Earth-observing satellites.

California wildfires will cost tens of billions, AccuWeather estimates

Yahoo News

AccuWeather now estimates the total damage and economic loss caused by the California wildfires in 2019 will be \$80 billion, according to ...

Europe facing mild start to winter, colder early next year -Weather Company

BOE Report (press release)

Most of Europe will remain relatively mild in November but there are risks of colder weather in northern and western Europe early next year, The ...

Storm Amélie leaves thousands without electricity in France

Heavy winds and rains hit the south and west, leading to power cuts in 55,000 homes.

International news and research

Increased storms creating 'stormquakes' are nothing to fear in NZ, GNS says

"Stormquakes" all around Earth are generating continuous seismic noise in New Zealand, scientists say.

Supercomputers have fastened Data Processing in Weather Forecasting Equipment

Space Market Research

An intelligence report titled, "Global Weather Forecasting Equipment ... Weather satellite monitors earth to collect data that is further analyzed by ...

Big data on weather

Down To Earth Magazine

There are 300 communication satellites that generate data through radio ... IBM, the largest weather forecasting company, has 270,000 monitoring ...

Why climate outlooks are so important

Australian Journal of Emergency Management

October 2019 edition

Climate outlooks, also called long-range forecasts, tell us what rainfall and temperature patterns are expected in the weeks, months and seasons ahead. As such, they are powerful tools to help make decisions related to weather and climate variability.

Climate models and geology reveal new insights into the East Asian monsoon

A team of scientists have used climate models and geological records to better understand changes in the East Asian monsoon over long geologic time scales.

Cloudy with a Chance of Podcast: Building Around a Changing Forecast

WHIO

The weather impacts everyone, and when your business and livelihood depend on the forecast, it can be even more stressful to see all the changes ...

Why are big storms bringing so much more rain? Warming, yes, but also winds

For three hurricane seasons in a row, storms with record-breaking rainfall have caused catastrophic flooding in the southern United States. A new analysis explains why this trend is likely to continue with global warming: Both the higher moisture content of warmer air and storms' increasing wind speeds conspire to produce wetter storms.

Changes in high-altitude winds over the South Pacific produce long-term effects

In the past million years, the high-altitude winds of the southern westerly wind belt, which spans nearly half the globe, didn't behave as uniformly over the Southern Pacific as previously assumed. Instead, they varied cyclically over periods of ca. 21,000 years. A new study has now confirmed close ties between the climate of the mid and high latitudes and that of the tropics in the South Pacific.

The world is getting wetter, yet water may become less available for North America and Eurasia

With climate change, plants of the future will consume more water than in the present day, leading to less water available for people living in North America and Eurasia, according to a new study. The research suggests a drier future despite anticipated precipitation increases for places like the United States and Europe, populous regions already facing water stresses.

New tornado casualty analysis will improve future predictions

New research gives insights into tornado casualty rates across the United States and casualty prediction models.

America's Cup (and sailing)

Spark 5G live on Auckland Harbour for Emirates Team New Zealand – helping to make the boat go faster

Real time data from race boat to chase boat – Spark announces next step with Emirates Team New Zealand

Business/Insurance

Governments and businesses seek resilience in a changing climate

GreenBiz

Billion-dollar weather is a growing trend. But even ... company Planet Inc., said during a VERGE 19 workshop about extreme weather technologies.

Energy and Mining

Award-winning Waikato student researching wave power

Award-winning Waikato student researching wave power for sustainable energy

A University of Waikato PhD student plans to harness the power of New Zealand's coastlines to provide affordable, clean and sustainable electricity using wave power.

Avangrid Renewables Seeks Permit for Kitty Hawk Metocean Study

Offshore WIND

Avangrid Renewables has submitted an application to the US Bureau of Ocean Energy Management (BOEM) for permission to install equipment to ...

How to use ocean data to cut fuel consumption

Riviera Maritime Media

Royston collaborated with Tidetech to overlay metocean data on an electronic fuel management system (EFMS) for more accurate vessel tracking and ...

Hydrology / Flooding

Behaviour around floodwater: challenges for floodwater safety and risk communication

Australian Journal of Emergency Management

October 2019 edition

There is little disagreement that entering floodwater is risky, whether in a vehicle or on foot. There is usually little or no visibility of what is under the surface and even shallow water with moderate flow can make vehicles unstable or sweep people off their feet. In addition, floodwater will often contain contaminants and debris. Therefore, the safest course of action is to avoid entering floodwater. Indeed, the most pervasive risk communication message is 'If it's flooded, forget it'. This clear, unambiguous message is good at getting people's attention, but it is unclear whether it actually changes behaviour. Research with Australian public, floodplain management

professionals, State Emergency Services (SES) personnel, and other emergency management experts has identified a number of challenges to floodwater safety and risk communications. Using a combination of research evidence and expert opinion, this paper discusses four pressing challenges and highlights some of the approaches being taken to help address them.

Space weather

South Africa Beefing Up Space Weather Expertise

Space.com

Space weather is a suite of phenomena caused by highly charged plasma ... Such events can interfere with satellites in orbit and even interfere with ...

Transport/roading/shipping/freight

Toyota and Weathernews join forces in joint research effort to improve accuracy of weather ...

Automotive World

Weathernews INC. (Head Office: Mihama-ku, Chiba City; President and Representative Director: Chihito Kusabiraki; hereafter referred to as ...

Weather in pictures

'UFO clouds' create spectacle in skies over Tasmania

It's not just the dancing lights of the Aurora Australis or the vibrant blue algae of bioluminescence that wow shutterbugs in Australia's southernmost state.

Climate change / global warming / sea level rise

National will vote in favour of two sizable pieces of climate change fighting legislation

The National Party will vote in favour of two sizable pieces of climate-change fighting legislation but will continue to fight for substantial changes to both bills.

More than 11,000 scientists from around the world declare a 'climate emergency'

In a move that backs a term used to date mainly by climate activists and left-leaning politicians, a new study by 11,258 scientists in 153 countries from a broad range of disciplines warns that the planet "clearly and unequivocally faces a climate emergency," and provides six broad policy goals that must be met to address it.

Govt invests \$26m in methane-measuring from space

While work is underway to lower methane emissions at the farm gate, the government is investing in a new project to measure emissions from the final frontier.

'The clock is ticking': Less talk, more action needed in the race against climate change

It's been over a year since the Intergovernmental Panel on Climate Change warned global warming needed to be limited to 1.5 degrees Celsius, so what has been done in that time to address the rising risk of climate change? [Brittney Deguara](#) reports.

Here's How Climate Change Is Going to Affect 'Super El Niño' Events in The Future

Climate change is reshaping the evolution and intensity of El Niño events in a way that favors the occurrence of more "super" El Niños, according to a [study](#) published Monday

Weather no worry for buyers wanting to live by the sea, data shows

Stuff.co.nz

If the summer weather has prompted you to think about a shift to the beach, you'll need to be prepared to pay. New data from Homes.co.nz shows that ...

Flooded future: global vulnerability to sea level rise worse than previously understood

29 Oct 2019

Climate Central

Sea level rise is one of the best known of climate change's many dangers. As humanity pollutes the atmosphere with greenhouse gases, the planet warms. And as it does so, ice sheets and glaciers melt and warming sea water expands, increasing the volume of the world's oceans. The consequences range from near-term increases in coastal flooding that can damage infrastructure and crops to the permanent displacement of coastal communities.

Main points:

As a result of heat-trapping pollution from human activities, rising sea levels could within three decades push chronic floods higher than land currently home to 300 million people

By 2100, areas now home to 200 million people could fall permanently below the high tide line

The new figures are the result of an improved global elevation dataset produced by Climate Central using machine learning, and revealing that coastal elevations are significantly lower than previously understood across wide areas

The threat is concentrated in coastal Asia and could have profound economic and political consequences within the lifetimes of people alive today

12 major climate change reports from 2019

Over the last six weeks, Americans have witnessed a remarkable burst of climate activism and communication. In two townhalls, Democratic candidates for president offered their plans for addressing climate change. Students and concerned citizens participated in climate strikes organized in [...]

The post 12 major climate change reports from 2019 appeared first on Yale Climate Connections.

How Trustworthy Are Scientific Assessments of Climate Change?

Scientific evidence relating to the climate system and the impact that people might be having on it spans dozens of fields of study and includes work from tens of thousands of individual scientists. Over the past few decades, there have been hundreds of independent scientific assessments of this body of evidence. This recent AMS Policy Program memo finds that many assessments are scientifically rigorous, produced using transparent processes, and include evaluation of uncertainty and confidence. Efforts to discredit scientific assessments with audiences that are unfamiliar with the underlying science or the processes used in preparing them are a disservice to science and the public.

Cloud seeding / Geoengineering

Climate engineering should not be considered a public good, new research shows

Definition of 'public good' does not account for potentially negative impacts of climate engineering

Professional interest

AMS 2020 Specialty Meetings are now accepting abstract Submissions:

The [13th Fire and Forest Meteorology Symposium](#)

The [19th Conference on Mountain Meteorology](#)

The [34th Conference on Agricultural and Forest Meteorology/Fifth Conference on Atmospheric Biogeosciences](#)

15 November - Abstract submission deadline for the [34th Conference on Hurricanes and Tropical Meteorology](#).

13-17 July 2020 - Save the date and submit your abstract for the [24th Symposium on Boundary Layers and Turbulence](#) in Sibenik, Croatia

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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.

November 5, 2019

News

[5 Common Sense Questions Answered About The U.S. Exit From The Paris Agreement](#)

November 5, 2019 - Forbes

What you need to know about the U.S. exit from the Paris Agreement.

[Read MORE](#)

['It's night and day': New radar allows scientists to peer inside California wildfires like never before](#)

November 3, 2019 - SFGate

Scientists with San Jose State University's Fire Weather Research Laboratory have been deploying to the blazes, taking advantage of the dire fire weather to test an experimental Doppler radar capable of peering into wildfire smoke plumes at unprecedented resolution.

[Read MORE](#)

[NASA gets infrared view of Atlantic Halloween subtropical storm](#)

October 31, 2019 - [Phys.org](#)

NASA's Aqua satellite passed over the eastern North Atlantic Ocean on Halloween and provided forecasters with an infrared view of Subtropical Storm Rebekah.

[Read MORE](#)

[Species Moving in Response to Climate Change, but Many Have Nowhere to Go](#)

November 3, 2019 - SciTech Daily

Many insects moving north in response to climate change find they have nowhere to go in Britain's intensively managed landscapes, according to new research.

[Read MORE](#)

[More countries than ever hit by forest fires in 2018](#)

November 5, 2019 - [Phys.org](#)

The JRC published the 2018 edition of its Annual Report on Forest Fires in Europe, the Middle East and North Africa.

[Read MORE](#)

[Sonoma's Kincade Fire was different — no one died. Here's why](#)

November 2, 2019 - San Francisco Chronicle

The past two weeks were a harrowing time in Sonoma County, but not a deadly one.

[Read MORE](#)

The AI Revolution Could Kill Fossil Fuels

November 4, 2019 - Markets Insider- Business Insider

With the global carbon emissions tipping point right around the corner and catastrophic climate change becoming an ever more likely outcome for the not-too-distant future, finding a way to curb emissions and encourage cleaner energy production practices has never been so important or so urgent.

[Read MORE](#)

Calendar says hurricane season is almost over, what about Mother Nature?

October 31, 2019 - Palm Beach Post

November is the final month of the hurricane season, but is the atmosphere following the calendar this year?

[Read MORE](#)

As air quality problem persists, local experts turn to technology

October 31, 2019 - Houston Chronicle

Researchers from the University of Houston have developed an artificial intelligence-based ozone forecasting system to predict ozone levels at least 24 hours in advance.

[Read MORE](#)

Study shows how climate change may affect environmental conservation areas

October 31, 2019 - [Phys.org](#)

Brazil contains the largest expanse of tropical ecosystems within protected areas, but a significant proportion of these reserves may be vulnerable to the effects of ongoing global climate change, according to a study published in the journal Conservation Biology.

[Read MORE](#)

Algae blooms to make glaciers melt faster than thought: scientists

October 31, 2019 - Reuters US News

Glaciers will melt faster than current models on climate change account for as algae blooms colonize them and reduce their ability to reflect the sun's heat, scientists studying glaciers said.

Read MORE

Drones help map Iceland's disappearing glaciers

October 30, 2019 - Phys.org

A new 3-D process which involves old aerial photos and modern-day drone photography has shed light on accelerated ice loss from some of Iceland's largest glaciers.

Read MORE

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My latest WeatherEye from John Maunder

<https://www.sunlive.co.nz/blogs/14004-tauranga-october-average-afternoon-temperatures-19132019.html>

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