

New Zealand weather and climate news (MetService focus)

'Happy weather' coming this weekend as big high heads towards New Zealand

Newshub

The big high will bring "mainly settled" conditions across the country after chilly winds petered out on Thursday, MetService says. "After a cold start for ...

Weekend weather looks promising for most as sun shines in the east

Stuff.co.nz

MetService is forecasting Auckland to get to a high of 14C on Friday and 15C on both days of the weekend. The forecast shows a chance of isolated ...

Cold mornings, but mild daytime temperatures expected in Hawke's Bay

New Zealand Herald

MetService meteorologist Mmathapelo Makgabutlane said cold mornings and mild daytime temperatures will be the theme for the week. "After fine ...

Weather: 110kmh gales cut power as wintry blast brings thunderstorms and snow

Stuff.co.nz

... weather-related incidents in Auckland as bad weather rolled in. Crews were responding to trees down and a roof lifting at an industrial business in ..

Northland flooding: Millions of dollars of damage to homes, buildings, vehicles

Damage caused by recent floods in Northland that have been called a once in 500-year event are expected to cost insurance companies millions of dollars.

Northland's "one in 500 year" flooding – Expert Reaction

Northland is bracing for another bout of heavy rain, while barely recovering from the weekend's storm.

The downpour was labelled a "one in 500 year event" by MetService, and the region's Civil Defence is predicting an expensive clean-up.

The SMC asked experts to comment.

Professor James Renwick, Head of School of Geography, Environment and Earth Sciences, Victoria University of Wellington, comments:

“The recent flooding in Northland has been devastating for many communities. Having your home, your farm, or your business flooded must be a terrible experience, let alone damage to infrastructure. The economic costs of such events can be huge.

World Weather With Erick Brenstrum

Former Metservice Severe Weather Meteorologist Erick Brenstrum has been keeping an eye on weather patterns across the world.

WMO

WMO launches 2021 Calendar Competition

The WMO photo competition is back!

Symposium considers role of weather, climate and environmental factors in COVID-19

The World Meteorological Organization (WMO) and international science partners are hosting a virtual global symposium from 4 to 6 August to review the relationship between weather, climate and...

Extreme weather (and other news) – Australia and Pacific

Q&A with Chris Brenchley Meteorologist in Charge at the Central Pacific Hurricane Center

Maui Now

Q&A with Chris Brenchley Meteorologist in Charge at the Central Pacific Hurricane Center The questions were answered as part of the 5 p.m. update.

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

5 killed during heavy flooding in northern Vietnam

The Thaiger

The US is ramping up military pressure on China and tensions in the **South China Sea**. It's accusing Beijing of leveraging the Covid-19 pandemic to ...

South Asia monsoon: More than 130 people killed in Nepal floods

The monsoon season in Nepal started last month, then took a turn for the worse on Sunday.

Wuhan on alert again: Flooding poses threat to 11 million people

Seven months since the first COVID-19 infection in the Chinese city, its residents are now facing a new threat.

145-year old India Meteorological Department launches first app for general users

WION

The 145-year-old India **Meteorological** Department (IMD) has launched its first app for the general public. This application will be called 'Mausam' and ...

Extreme weather (and other news) – Americas and Europe

A cloud larger than Mount Everest spun over Calgary on Thursday. It was a supercell thunderstorm.

Washington Post

Kyle Brittain, a meteorologist and Calgary bureau chief at the **Weather Network**, captured the likely tornado west of Calgary at 2:32 p.m. local time.

International news and research

What's Going on Inside the Fearsome Thunderstorms of Córdoba Province?

The New York Times

While the fog had little **meteorological** effect on the storm, it had ... at play, it became apparent to modern **meteorologists** that predicting storms required ...

Q&A: Oceanographers Tell How the Pandemic Crimps Global **Ocean** and Climate Monitoring

InsideClimate News

In the short term, global **weather** forecasting systems "will run off the rails," without crucial data about conditions at the surface of the **ocean** and the ...

Taiwan Launches its Largest-Ever Research **Vessel**

The Maritime Executive

It is also the only research **ship** equipped with a bow **weather** tower so that it can collect **meteorological** data and return it to the **Meteorological** ...

Wetter than wet: Global warming means more rain for Asian monsoon regions

EurekAlert

Previous studies often applied a global, uniform increase in temperature plus the regional variations created by the **El Nino** effect. To separate their ...

The science behind Wednesday's severe storms in DC: A visual guide

Washington Post

Meteorologists have a variety of tools to assess the intensity of these storms, called squall lines. Severe-weather reports Wednesday logged by the ...

Hurricane graveyard: Where cyclones go to die in the Caribbean Sea

The Weather Network

The **Weather Network** meteorologist Jaclyn Whittal says that the hurricane graveyard tends to affect weaker storms such as category 1 hurricanes or ...

2,000 years of storms in the Caribbean

Posted: 22 Jul 2020 01:32 PM PDT

The hurricanes in the Caribbean became more frequent and their force varied noticeably around the same time that classical Mayan culture in Central America suffered its final demise: We can gain these and other insights by looking at the climate archive.

Flood data from 500 years: Rivers and climate change in Europe

Posted: 22 Jul 2020 08:26 AM PDT

Studying historical documents from 5 centuries, scientists were able to compare flood events from the past with recent flood events in Europe. This combination of historical and hydrological research provides evidence for the strong influence of climate change on rivers and floodings. Floods tend to be larger, the timing has shifted and the relationship between flood occurrence and air temperatures has reversed.

Alaska is getting wetter: That's bad news for permafrost and the climate

Posted: 24 Jul 2020 01:14 PM PDT

Alaska is getting wetter. A new study spells out what that means for the permafrost that underlies about 85% of the state, and the consequences for Earth's global climate.

Weather companies

ClimaCell raises \$23M Series C for its **weather** intelligence platform

TechCrunch

ClimaCell, the **weather** forecasting and intelligence service that is using a ... Instead of just giving its users a **weather** forecast, the company's tools provide ... energy, **insurance**, and more represent a complete upending of the existing ...

Aviation

Aussie **aviation** technology leader SkyNet **Aviation** now offers world-leading **weather** data via DTN

Mirage News

“DTN provides global **weather** data and analytics that can be incorporated within any **aviation** industry-leading solution,” Eilts notes, “and SkyNet ...

New Zealand firm Dawn Aerospace unveils sub-orbital plane

New Zealand Herald

... to scale up the size of the vehicle later this decade to allow it to compete with **Rocket Lab** and other companies capable of carrying cargo into orbit.

Air travel expected to not recover before 2024

Boston News, Weather, Sports | WHDH 7News

The International **Air** Transport Association pushed back its prediction by one year due to the slow containment of the outbreak in the U.S. and ...

Climate change

Friederike Otto interview: Can we sue oil giants for extreme weather?

We can now rapidly and reliably link heatwaves, droughts and hurricanes to human-induced global warming, says climate scientist Friederike Otto. The science could soon be used as evidence in legal cases brought against fossil fuel companies

Hayward Joins Prestigious Team Of 30 To Write Global Climate Report

A University of Canterbury (UC) expert on sustainability, youth, climate and democracy is the only New Zealander appointed to the prestigious Intergovernmental Panel on Climate Change (IPCC), Core Writing Team of thirty world experts.

Waikato greenhouse gas production highest in New Zealand

Waikato was the biggest producer of greenhouse gases in the country in 2018, new data from Statistics New Zealand shows.

Clouds

Pristine environments offer a window to our cloudy past

Posted: 27 Jul 2020 12:42 PM PDT

A new study uses satellite data over the Southern Hemisphere to understand global cloud composition during the industrial revolution. This research tackles one of the largest uncertainties in today's climate models -- the long-term effect of tiny atmospheric particles on climate change.

Cloud Data A Silver Lining For Climate Change Predictions

Clouds above the Southern Ocean could hold the key to more accurate global climate change predictions.

Energy and Mining

Blueprint may power up Saudi Arabia's wind energy future

Tech Xplore

... set of wind and **weather** observations and analysis of land-use restrictions, cost and **technologies** to guide the optimal buildout of wind turbines.

Farming/horticulture/Aquaculture/forestry

Concepts in sustainable aquaculture - IMTA

NIWA

However, to date research has been limited and there are no commercial farms using IMTA practices in New **Zealand**. The paper, written by Dr Stenton- ...

Canterbury winegrowers well-placed to weather climate change

Stuff.co.nz

Marlborough winegrowers prepare for **El Nino**. More rain was expected during the months of September, October, January, February and April, with 15 ...

Government (regional and national)

Hawke's Bay to float setting up a climate mitigation unit

A climate mitigation unit could be set up at Hawke's Bay Regional Council if the community agree, but there is disagreement around the council table.

Health

'Silent killer' heat waves can worsen heart and lung conditions

Summer can bring sweltering heat waves. And that's not just unpleasant. It can cause heat stroke or make people's heart or kidney problems worse.

"We talk about it a lot as a silent killer. You know, it's not people directly dying from heat as often as indirect effects," says health data analyst Jackson Voelkel.

Climate change is fuelling the spread of deadly tropical diseases

As temperatures creep up, communities are being hit with diseases they've never encountered before. The consequences are deadly

History

Weatherwatch: the woman who unlocked the secrets of clouds

How Joanne Simpson's blue-sky thinking helped meteorologists better understand the climate

Lightning

Lightning strikes more than 100 million times per year in the tropics

Posted: 23 Jul 2020 06:27 AM PDT

Tropical storms often begin with an impressive display of pyrotechnics, but researchers have largely overlooked the role of lightning strikes in tropical ecosystems.

New study finds lightning destroys 832 million trees each year in tropics alone

The Weather Network

... a post-doctoral fellow at STRI, tells The Weather Network in an email. "Fundamentally, different climatic conditions lead to differences in vegetation, ...

Transport/roading/shipping/freight

Integrated data enables interactive route optimisation

Riviera Maritime Media

This includes **forecast** and hindcast data for wind, waves and currents. Customers include major **shipping** lines, **weather** routeing companies and **vessel** ...

Journal and articles online

Open Access

Linking weather patterns to regional extreme precipitation for highlighting potential flood events in medium- to long-range forecasts

Doug Richardson, Robert Neal, Rutger Dankers, Ken Mylne, Robert Cowling, Holly Clements, Jonathan Millard

e1931 | First Published: 21 July 2020

The paper explores the potential of using weather patterns (WPs) as a preliminary step in producing forecasts of upper-tail precipitation threshold exceedance probabilities for the UK. WPs associated with higher probabilities of extreme precipitation are shown to have occurred during two well-known flood events: the 2014 Somerset Levels floods in southwest England; and Storm Desmond over the northern UK in December 2015. To illustrate the potential of this WP-based prediction framework, a forecast guidance tool intended for use by hydro-meteorologists in the England and Wales Flood Forecasting Centre (FFC) is introduced.

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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.

Hurricane Douglas Brushed Hawaii; Closest Hurricane to Oahu in At Least 61 Years

The Weather Channel - July 26, 2020

Hurricane Douglas brushed Hawaii with rain and wind, but its track spared the islands its worst by just a few dozen miles.

What's Going on Inside the Fearsome Thunderstorms of Córdoba Province?

The New York Times - July 22, 2020

Scientists are studying the extreme weather in northern Argentina to see how it works — and what it can tell us about the monster storms in our future.

Covid-19 is impacting how weather experts issue hurricane forecasts

CNN - July 25, 2020

The National Hurricane Center and other NOAA agencies are among those essential organizations that are trying to protect their employees from Covid-19 so they can keep working and putting out life-saving information for American families.

Megaflashes Bust Lightning Myths

Forbes - July 24, 2020

Lightning is one of the more unpredictable aspects in nature. Many meteorologists report that they are most afraid of lightning – more than tornadoes and hurricanes – due to its erratic nature.

2,000 years of storms in the Caribbean

ScienceDaily - July 22, 2020

The hurricanes in the Caribbean became more frequent and their force varied noticeably around the same time that classical Mayan culture in Central America suffered its final demise: We can gain these and other insights by looking at the climate archive.

NASA's Tracking Hawaii-bound Major Hurricane Douglas

NASA - July 24, 2020

NASA's Aqua satellite used infrared light to identify strongest storms and coldest cloud top temperatures and found them surrounding the eyewall of the powerful hurricane.

Pristine environments offer a window to our cloudy past

EurekAlert! - July 27, 2020

A new study uses satellite data over the Southern Hemisphere to understand global cloud composition during the industrial revolution.

Renowned Meteorologist Marshall Shepherd on Race Gap in Climate Science

NECN - July 16, 2020

Shepherd, a former president of the American Meteorological society explains what we need to do to close the climate gap.

A new tropical storm is likely to form in the Atlantic as hyperactive hurricane season continues

The Washington Post - July 27, 2020

There is a high chance that Isaias will form in the coming days.

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WeatherEye with John Maunder

<https://www.sunlive.co.nz/blogs/14908-solar-activity-and-next-maunder-minimum.html>

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Thanks to our regular contributors.

