

New Zealand weather and climate news

(MetService – used with permission, these clips are provided by The MetService Library)

Freezing start for most with warnings of black ice

Wellington and Kāpiti were a little colder than early Wednesday, MetService meteorologist Bill Singh said. Wellington Airport got to 5.5C, Porirua to 0.2C and Lower Hutt to 1.6C.

Freezing start to day for much of the country

"It's a frosty start for a lot of places," MetService meteorologist Bill Singh said.

Temperatures plunge on coldest morning of year

Pukaki Airport - near Twizel in the South Island's Mackenzie District - was the country's coldest spot, dropping to a freezing -7C, MetService meteorologist Bill Singh said.

Coldest night of the year for wider Waikato

Taupō, Tauranga and Taumarunui saw the coldest nights of the year so far, MetService meteorologist Andrew James said on Wednesday.

Taumarunui's temperature plunged to -4C overnight, Tauranga dropped to 1.9C and Taupō to -1.2C.

Heavy snow watch in place for parts of Southland

Stuff.co.nz

Meteorologist Lisa Murray said the heavy snow watch above 400m was put in place on Monday morning. Snowfall was recorded in Southern ...

Bay residents brace for chilly mornings

New Zealand Herald

Hawke's Bay residents will be waking to cooler mornings this week. MetService meteorologist Lisa Murray said "fine conditions" were expected across ...

South Canterbury skifields confident for good season

Stuff.co.nz

MetService predict there could be a light dusting across the three slopes on Friday but nothing more in the short term. "We have a frontal rain band that ...

Coldest morning of the year after -2.6C start to the day

New Zealand Herald

When you thought it was cold yesterday, you were wrong. MetService has confirmed this morning's temperature of -2.6C in Rotorua was the coldest ...

MetOcean

Distant processes influence marine heatwaves around the world

An international team has produced the first global assessment of the major drivers of marine heatwaves.

ECMWF

SMOS joins forces with top weather forecasting system

Phys.Org

As of 11 June 2019, measurements from ESA's SMOS mission are being fully integrated into ECMWF's forecasting system, allowing for a more ...

WMO

Public-private sector link vital for weather forecasting

Breaking silos between the public and private sectors is critical if countries are to face up to weather and climate challenges and take advantage of the rapid pace of change in technology, the World...

WMO verifies 3rd and 4th hottest temperature recorded on Earth

The World Meteorological Organization (WMO) has officially evaluated temperature record extremes of 54.0 °C at two locations, one in Mitribah, Kuwait, on 21 July 2016 and a second in Turbat,...

WMO acts on sand and dust storms

Sand and dust storms are meteorological phenomena and a natural hazard and occur in arid and semi-arid regions.

Extreme weather (and other news) – Antarctica and offshore

The Kermadecs - a sub-tropical paradise with earthquakes, volcanoes and tsunami

Sunday's tsunami warning was a good reminder New Zealand is surrounded by trouble.

That includes the Kermadec Islands, which stretch northeast off the Bay of Plenty towards Tonga.

Millions of dollars for Antarctic research

The Antarctic Science Platform is thrilled to announce \$26 million will be awarded to long-term Antarctic research projects.

Extreme weather (and other news) – Australia and Pacific

Disaster managers benefit from BOM masterclass

Experts from the Bureau of Meteorology recently gathered in Sydney to inform and educate the disaster resilience sector on extreme weather events and natural hazard mitigation.

Climate expert warns of 'losing the carbon war'

A leading Pacific climate scientist says the global climate crisis will continue with devastating effect unless fossil fuels are completely phased out.

Te Ang Maitoro: cooling Kiribati and Samoa

1 Apr 2019

Mary Anne Teariki, Ramona Tiatia, Ian Shearer, Philippa Howden-Chapman

New Zealand Institute for Pacific Research

The Small Island Developing States (SIDS) of the Pacific are undergoing significant change as they seek to become more sustainable and resilient to risks and disturbances from natural disasters and the effects of climate change. As a key component of sustainable development, Kiribati and Samoa have made commitments under the United Nations Sustainable Development Goals (SDGs) to increase the proportion of their populations with access to clean and sustainable sources of energy and to reduce dependence on fossil fuels. Consistent with these objectives, and with increasing donor assistance in the region, both Kiribati and Samoa have invested in new forms of renewable energy sources. These include the use of solar PV, wind, bioenergy and hydro (in Samoa). To understand the challenges and types of investment that will improve the socioeconomic outcomes of their citizens, a wide range of stakeholders were interviewed in Kiribati and Samoa. While responses were diverse on many fronts, renewable energy was considered by stakeholders in both countries as the way of the future, a way of improving socioeconomic outcomes for the most vulnerable households and communities, and a way of

managing risks and improving resilience. In particular, access to clean and sustainable sources of energy were seen as being critical in improving education, health, and safety outcomes for women, children, and youth, who typically bear the brunt of energy poverty, particularly in relation to access to electricity.

Notwithstanding these benefits and despite their diversity, both Kiribati and Samoa face a number of common challenges, including dealing with rapid urbanisation and capacity constraints. In Kiribati, these challenges have become increasingly complicated as a result of extremely high population densities in South Tarawa, inadequate infrastructure, and environmental degradation, due to climate change (rising sea levels) and other anthropogenic impacts. In Samoa, risks from extreme climatic events and natural disasters have led to increased levels of resilience building led by governance strengthening and the dissemination of key information to communities. The report puts forward a small number of renewable energy initiatives that have the potential to improve sustainable development and resilience in both countries and strengthen the robustness of their electricity sectors

Extreme weather (and other news) – Americas and Europe

Photograph lays bare reality of melting Greenland sea ice

Rapidly melting sea ice in Greenland has presented an unusual hazard for research teams retrieving their oceanographic moorings and weather station equipment.

A photo, taken by Steffen Olsen from the Centre for Ocean and Ice at the Danish Meteorological Institute on 13 June, showed sled dogs wading through water ankle-deep on top of a melting ice sheet in the country's north-west. In the startling image, it seems as though the dogs are walking on water.

Swiss Federal Office of Meteorology and Climatology Advances Weather Forecasting With New ...

Yahoo Finance

Cray continues to innovate today at the convergence of data and discovery, offering a comprehensive portfolio of supercomputers, high-performance ...

International news and research

New global warming model highlights strong impact of social learning

A new climate modeling approach suggests that social processes strongly affect global warming predictions, and mitigation efforts should account for this influence.

Community impacts from extreme weather shape climate beliefs

Posted: 31 May 2019 10:58 AM PDT

A new study finds that how our community or neighborhood fares in an extreme storm or flood may have a stronger, more lasting effect on climate beliefs than individual losses do.

Downpours of torrential rain more frequent with global warming

Posted: 03 Jun 2019 10:26 AM PDT

The number of extreme downpours increased steadily between 1964 and 2013 -- a period when global warming also intensified, according to new research.

Weather Forecasts Will Soon Use Weird, Bendy GPS Signals

WIRED

Data from the COSMIC satellites also will help forecasters better track and predict the movement of big ... It has't been used for weather forecasting yet.

How Do Spaghetti Models Predict a Hurricane's Path?

HowStuffWorks

If you're living in a coastal area prone to hurricanes and major tropical storms, you may not be all that interested in the statistical and meteorological ...

Energy and Mining

Oil rig ready to begin drilling in Taranaki waters

Here's a vessel you don't see every day - a self-propelled oil rig the size of a rugby field.

The CSOL Prospector is expected to begin drilling for oil in the Tui field off the Taranaki coast within days after a lengthy four-month journey from Norway.

A powerful case for research

Electricity networks have considered their future research needs through the Bushfire and Natural Hazards CRC, which identified risk and vulnerability, stakeholder engagement, regulation and capturing data for better forecasting and modelling as their highest priorities.

Climate change puts pressure on Europe's energy system

European Environment Agency (press release)

Some of the climate change impacts on the energy system can be ... Warming temperatures decrease energy demand for heating, but increase energy ... to the European energy system from extreme weather events could amount to ...

Hydrology / Flooding

New Zealand Hydrological Society Conference

The conference theme is 'Water, above, below and beyond – Challenges facing civilisation'. This sets the scene for targeted papers that demonstrate our key relevance to society.

VENUE/DATE

Rotorua

Tue 3 December, 2019 - Fri 6 December, 2019

Lightning

18 homes in The Villages have suffered damaging lightning strikes in past 15 years

Villages-News

18 homes in The Villages have suffered damaging lightning strikes in past ... to Dr. Martin Uman's book, The Art and Science of Lightning Protection.

Satellites and radar

Six weather satellites are all set to be launched by NOAA

TechGenYZ

The National Oceanic and Atmospheric Administration are all set to launch six weather satellites for better weather monitoring and predictions in ...

Transport/roading/shipping/freight

ClimaCell's Road Risk Score: When Weather Meets the Road

Innovation and technologies (inc data and new products)

NEC Receives EUR50 Million Order from Deutscher Wetterdienst (DWD)

Yahoo Finance

DWD provides meteorological and climatological services to German ... Dr. Rudolf Fischer, Director of Core Technologies at NEC Deutschland said: ...

FCC Defends Use Of 5G Spectrum; Won't Interfere With Weather Forecast Satellites

Global Industry News Info (press release) (blog)

Dept. of Commerce, which heads NOAA & NASA stated that this band use would interfere with water vapor satellite observations intended for weather ...

Increasing Demand for Weather Monitoring Network Market to Fuel Revenue Growth Through ...

Consumer Reports

Advancements in technology in the recent decades have also improved the overall weather monitoring network for a more precise outlook on the ...

Climate change / global warming / sea level rise

We still have time to act on climate change — but records will tumble for next 20 years regardless of emissions: study

Our last summer was the hottest on record in Australia, and we can expect the record breaking weather to continue for at least the next 20 years, new climate change research has found.

Iwi committed to combating climate change

Māori have fought long and hard to preserve and nurture the environment, but the growing surge of devastating impacts caused by climate change continues.

Mike Smith is the chair of the Climate Change Iwi Leaders Group and, for the last ten years, he has devoted his life to climate action.

Moana Maniapoto asked him what set him on the path he's taken, which has seen him thrust into the spotlight many times.

The poisons released by melting Arctic ice

Pollution, anthrax - even nuclear waste - could be released by global warming

UN climate chief says 3C hotter world 'just not possible'

Climate change is an "existential issue", and stepping up efforts to keep warming to agreed limits is urgent, the U.N. climate chief says

Emergency preparedness / disaster planning / resilience

What do we mean by 'floodwater'?

Flood safety messages are relatively clear, but people still continue to enter through floodwater. Research in the Australian Journal of Emergency Management reflects on this behaviour.

Journal and articles online

Quarterly Journal of the Royal Meteorological Society

Accepted Articles

Accepted, unedited articles published online and citable. The final edited and typeset Version of Record will appear in the future.

Impacts of Future Urban Expansion on Urban Heat Island Effects during Heatwave Events in the City of Melbourne in Southeast Australia

H. M. Imran, J. Kala, A. W. M. Ng, S. Muthukumaran

First Published: 01 June 2019

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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.

June 18, 2019

News

The U.S. Isn't Nearly as Dry as It Was a Year Ago

June 18, 2019 - Weather Underground

About 4 percent of the contiguous U.S. was experiencing drought conditions on June 11, compared to just under 28 percent a year ago, according to the U.S. Drought Monitor.

Read MORE

New Engine Is Driving NOAA's Flagship Weather Forecast Model

June 18, 2019 - NOAA

As NOAA launches a major upgrade of its flagship weather forecast model today, an important part is the Global Forecast System's new dynamical core.

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Biblical Plague of Locusts Is Swarming over Italian Farmlands. Could It Happen in the US?

June 18, 2019 - AccuWeather

Sardinia is dealing with its worst swarm of locusts in 70 years as the insects destroy crops, infest houses, and devastate animal grazing pastures. Weather patterns played a role.

[Read MORE](#)

WMO verifies 3rd and 4th hottest temperature recorded on Earth

June 18, 2019 - World Meteorological Organization

The World Meteorological Organization (WMO) has officially evaluated temperature record extremes of 54.0 °C at two locations, one in Mitribah, Kuwait, on 21 July 2016 and a second in Turbat, Pakistan, on 28 May 2017.

[Read MORE](#)

Satellites assisting look into hurricanes

June 17, 2019 - Phys.org

A mission to probe winds deep inside hurricanes, where most satellites cannot see and few aircraft venture, is showing signs of success despite an unexpected obstacle linked to tensions in the Middle East.

[Read MORE](#)

Scientists used small explosions to 'see' under a melting glacier

June 15, 2019 - PressFrom

By learning how much a melting Thwaites will contribute to global sea levels over the next century, researchers hope scientists will be able to pinpoint how much reducing carbon emissions would, in turn, reduce that sea level rise.

[Read MORE](#)

[Temperatures leap 40 degrees above normal as the Arctic Ocean and Greenland ice sheet see record June melting](#)

June 14, 2019 - The Washington Post

In recent days, observations have revealed a record-challenging melt event over the Greenland ice sheet, while the extent of ice over the Arctic Ocean has never been this low in mid-June during the age of weather satellites.

[Read MORE](#)

[Using prevalent technologies and 'Internet of Things' data for atmospheric science](#)

June 14, 2019 - Phys.org

The use of prevalent technologies and crowdsourced data may benefit weather forecasting and atmospheric research, according to a new paper authored by Dr. Noam David, a visiting scientist at the Laboratory of Associate Professor Yoshihide Sekimoto at the Institute of Industrial Science, The University of Tokyo, Japan.

[Read MORE](#)

[From rain to flood](#)

June 14, 2019 - Phys.org

To study the impacts of hydrological extremes holistically—from precipitation to water entering the ground to discharge to flow into the ocean—a measurement campaign at Müglitztal/Saxony is about to start under the MOSES Helmholtz Initiative.

[Read MORE](#)

[Mount Everest is now home to the world's highest weather station](#)

June 14, 2019 - Digital Trends

An international team of scientists recently made it to the top of Mount Everest to install a number of weather stations, with one of them, not surprisingly considering its location, becoming the highest such station on Earth.

[Read MORE](#)

[Why Your Local Weather Forecast Is Going To Get Better](#)

June 13, 2019 - Southern California Public Radio

This week, the National Oceanic and Atmospheric Administration announced that it has upgraded its main weather forecasting model, called the Global Forecast System.

[Read MORE](#)

[How Sediment Layers Reveal Earth's Ancient Climate Cycles](#)

June 18, 2019 - Discover

Ribbons of blue — the modern Raritan and Neshanic rivers — slice across a landscape that's key to understanding Earth's deep-time climate cycles.

[Read MORE](#)

[The biggest Arctic expedition ever will spend a year in sea ice studying climate change](#)

June 16, 2019 - Tulsa World

This fall, scientists will launch the largest Arctic research expedition in history: a 12-month, \$134 million, 17-nation effort to document climate change in the fastest-warming part of the globe.

[Read MORE](#)

[Space weather satellites set to launch](#)

June 15, 2019 - Chemical & Engineering News

Taiwan and the US will operate 6 satellites that will improve tropical-storm prediction and provide details about the ionosphere.

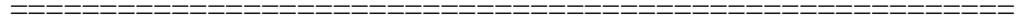
[Read MORE](#)

[Emails: Trump official consulted global warming rejecters](#)

June 14, 2019 - AOL.com

A Trump administration national security official has sought help from advisers to a think tank that disavows climate change to challenge widely accepted scientific findings on global warming, according to his emails.

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