From: Jessica Rowley < Jessica.Rowley@niwa.co.nz >

Sent: Thursday, March 9, 2023 9:55 AM
To: 9(2)(a) 9(2)(a) nzme.co.nz>
Subject: RE: Herald media request

Kia ora ^{9(2)(a)}

We've collated some responses for you, pasted below.

Let me know if you need anything else.

Cheers Jess

From: nzme.co.nz>

Sent: Tuesday, 7 March 2023 1:03 pm

To: Jessica Rowley < Jessica.Rowley@niwa.co.nz >

Subject: Herald media request

Kia ora Jess

9(2)(a) here from the Herald. This is a media request based on the claims made by Ian Wishart over Twitter.

Wishart says Niwa has not researched or catalogued most of New Zealand's past extreme weather events, meaning terms like "since records began" or "1 in 100 year" event can't be substantiated.

What's your response to this?

The website Ian Wishart has based his opinions on is not New Zealand's national climate database.

Mr Wishart has conflated the Historic Weather Events website with the New Zealand National Climate Database that is used by NIWA to analyse weather events and trends in the climate. NIWA's database includes official observations back to the 1850s, including some descriptions of significant weather events of the time.

The Historic Weather Events website that Wishart has viewed is a catalogue that was created to collate descriptive details on impacts and hazards from weather events. It is not an official type of meteorological record. It has gaps because it contains information gathered from newspaper articles, journals, books and reports that periodically come to light. Gathering these sources takes significant time and is an ongoing process.

How does Niwa record, research and catalogue past weather events? What is the standard practice here?

NIWA is the custodian of the aforementioned New Zealand National Climate Database, a national electronic database of high-quality instrumental observations, including temperature, rainfall, wind, pressure, and much more.

NIWA holds data from approximately 6500 climate stations across the country, surrounding islands, some Pacific Islands and Antarctica. NIWA also retains paper and digital copies of original historical observations which are classified as a heritage asset.

NIWA holds 10-minute, hourly and daily observations from more than 600 stations currently operated by both NIWA, MetService and other organisations. These data are freely available via CliFlo (https://cliflo.niwa.co.nz/), along with about 80 types of monthly and annual statistical summaries, and several 30-year climate normals. This resource has been available to the public and researchers externally since 2007 and is frequently accessed.

NIWA's scientists use the database to rank and quantify how unusual observations are, and report on it. Summaries using these data are published monthly, seasonally, and annually at https://niwa.co.nz/climate/summaries

How far do records date back (for weather events that have been researched)?

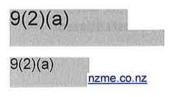
Official meteorological records in New Zealand go back to the 1850s, but some locations have longer periods of coverage than others. When reporting on climate anomalies and records in its summaries, NIWA includes the year during which records began for each location that is being discussed.

What analysis was used for the Cyclone Gabrielle assertions?

To produce this analysis, NIWA used data from the National Climate Database and the archived material as described above, as well as other tools from international organisations to provide some historical context. The comparisons to contemporary storms for which NIWA has high-quality observations were done using standard practices.

NIWA did not claim that Gabrielle was *the* strongest ever storm to pass near the North Island, only *one of* the strongest storms. Similarly, NIWA did not say it was caused by climate change, only that climate change was likely to be a factor in its severity.

Examining the significance of a weather event like Gabrielle extends well beyond a single meteorological metric. Atmospheric pressure, which Wishart has focused on, is only one way of measuring a storm's intensity and wind strength. NIWA typically examines several factors to describe a cyclone's intensity in its climate summary, including rain, wind, and sea-related impacts.

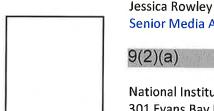


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Senior Media Advisor

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From: 9(2)(a) @discovery.com>

Sent: Tuesday, 21 March 2023 7:53 pm

To: Sarah Fraser < Sarah. Fraser@niwa.co.nz > Cc: 9(2)(a) < 9(2)(a) @discovery.com >

Subject: Re: Media request - Newshub

Thanks for this Sarah!

On Tue, 21 Mar 2023 at 6:20 PM, Sarah Fraser < Sarah. Fraser@niwa.co.nz > wrote:

Kia ora 9(2)(a)

Thanks for your enquiry, and below are answers to your questions – the highlights are intentional, so you can see where the differences are.

If you need any further information or explanation, please let me know.

• "The main point made is that in your 2022 Annual Climate Summary report, Greymouth (29.8C) and a number of other West Coast towns had their hottest February since records began."

NIWA's 2022 Annual Climate Summary does not make that statement. The table referred to is a table of "Extremes of high daily maximum temperature". It is not a statement about monthly values. Such a statement would be based on monthly mean (average) temperature.

• "Is historical data used when determining which years have been the hottest on record? In this instance, since Greymouth is recorded as having hotter days in 1906 and 1918, is it entirely accurate to say it had its hottest February day on record in 2022 when there's data saying otherwise?"

Yes, we use all historical data available in NIWA's New Zealand National Climate Database when determining hottest days, months or years. The New Zealand National Climate Database is a national electronic database of high-quality instrumental observations, including temperature, rainfall, wind, pressure and much more. The data in this database have undergone rigorous quality assurance procedures, and they have detailed station metadata accompanying the data.

The reports of West Coast temperatures Ian Wishart mentions are newspaper reports, which are not official
records and have not been validated, so do not appear in the National Climate Database.

"What are the reasons for not including historical data when determining the hottest days on record? Is it due to there being more accurate technology now and earlier data can't be relied upon as heavily, or something else?"

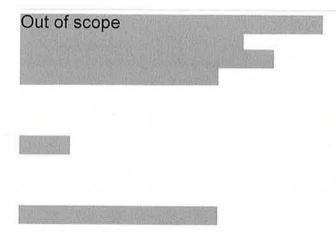
Newspaper reports require careful examination because they typically are not accompanied by important station metadata such as location, instrument type, instrument exposure, use of Stevenson screens, etc. They are not official records and require validation.

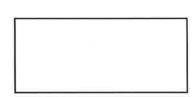
"The blog post also takes issue with NIWA using the "warmest year on record" to describe 2022, when its author found newspaper records showing temperatures at 36.1C, 35.6C, and other temperature anomalies. While these are high temperatures, even by current standards they're much higher than temperature spikes we get now. What makes a year the warmest year on record? Is it consistently higher temperatures across the country, is it just off the temperature itself, or something else?"

The "warmest year on record" is a statement we use which is derived from annual mean (average) temperatures. Those temperatures Wishart quoted are daily maximum air temperatures. They are different measures of temperature and should not be compared.

Kind regards

Sarah





Sarah Fraser Communications Manager

9(2)(a)

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9(2)(a) 9(2)(a)

wbd.com

PLEASE NOTE MY WORK HOURS ARE 1:30PM TO 10PM, SUNDAY TO THURSDAY

9(2)(a) ^{9(2)(a)}

9(2)(a) wbd.com From: Jessica Rowley < Jessica. Rowley@niwa.co.nz >

Sent: 03 March 2023 16:13

To: 9(2)(a)

Subject: RE: Wishart's climate of fear claims

Hi again 9(2)(a)

Here is our official statement:

NIWA'S HISTORIC WEATHER EVENTS WEBSITE

The Historic Weather Events website (https://hwe.niwa.co.nz/) is a catalogue of major weather events in New Zealand over the last 200 years, where significant damage or casualties occurred. NIWA sees it as a valuable resource provided primarily for the public and we are not aware of anything else that provides similar information for Aotearoa New Zealand in one place.

The information it contains has been collated from newspaper reports, journals, books and databases kindly provided by various organisations and individuals, and a lot of archive work went into building it. More historic data has become available online since the site was built. We continue to develop the site and will add missing events and additional details as we can (particularly those in the 1800s for which we still have to validate the data). The most recent update to the site was in 2021, and we are planning to continue this updating when resources are available.

The Historic Weather Events website was not a data source NIWA used for the analysis that resulted in the assertion that Cyclone Gabrielle was one of the most destructive weather events on record for Aotearoa.

ENDS

Kind regards,

Jess

From: <9(2)(a) @gisborneherald.co.nz>

Sent: Friday, 3 March 2023 9:37 am

To: Jessica Rowley < <u>Jessica.Rowley@niwa.co.nz</u>>
Subject: Re: Wishart's climate of fear claims

Great, thanks Jess

9(2)(a)

The Gisborne Herald Company Ltd 64 Gladstone Road PO Box 1143 Gisborne 4040 www.gisborneherald.co.nz

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From: Jessica Rowley < Jessica.Rowley@niwa.co.nz >

Sent: 03 March 2023 09:31

To: 9(2)(a)

Subject: RE: Wishart's climate of fear claims

Kia ora 9(2)(a)

We're working on a response/statement now, so I will send this over when it's ready and signed off.

Cheers

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Jessica Rowley Senior Media Advisor
9(2)(a)
National Institute of Water & Atmospheric Research Ltd (NIWA) 301 Evans Bay Parade, Greta Point Wellington New Zealand Connect with NIWA: niwa.co.nz Facebook LinkedIn Twitter Instagram

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