

The New Zealand Climate Science Coalition

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Are we feeling warmer yet?

(A paper collated by Richard Treadgold, of the Climate Conversation Group, from a combined research project undertaken by members of the Climate Conversation Group and the New Zealand Climate Science Coalition)

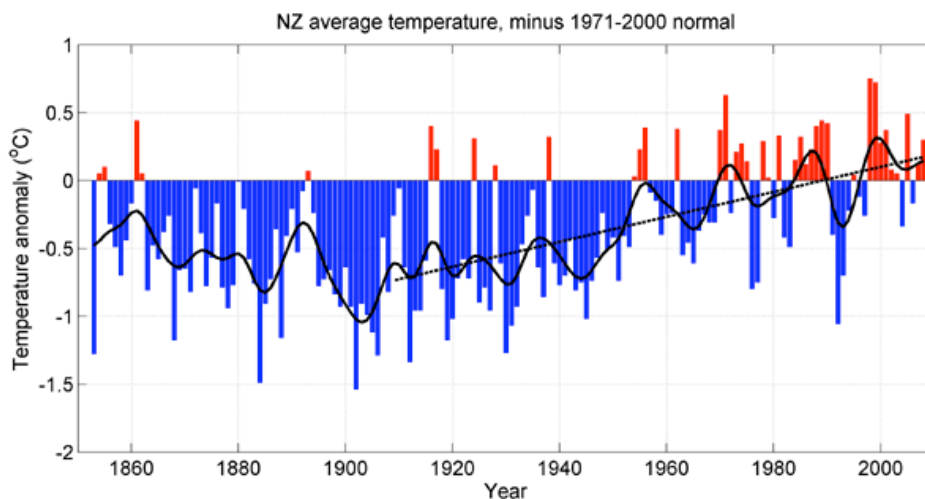
There have been strident claims that New Zealand is warming. The Inter-governmental Panel on Climate Change (IPCC), among other organisations and scientists, allege that, along with the rest of the world, we have been heating up for over 100 years.

But now, a simple check of publicly-available information proves these claims wrong. In fact, New Zealand's temperature has been remarkably stable for a century and a half. So what's going on?

New Zealand's National Institute of Water & Atmospheric Research (NIWA) is responsible for New Zealand's National Climate Database. This database, available online, holds all New Zealand's climate data, including temperature readings, since the 1850s. Anybody can go and get the data for free. That's what we did, and we made our own graph.

The official version

Before we see that, let's look at the official temperature record. This is NIWA's graph of temperatures covering the last 156 years:



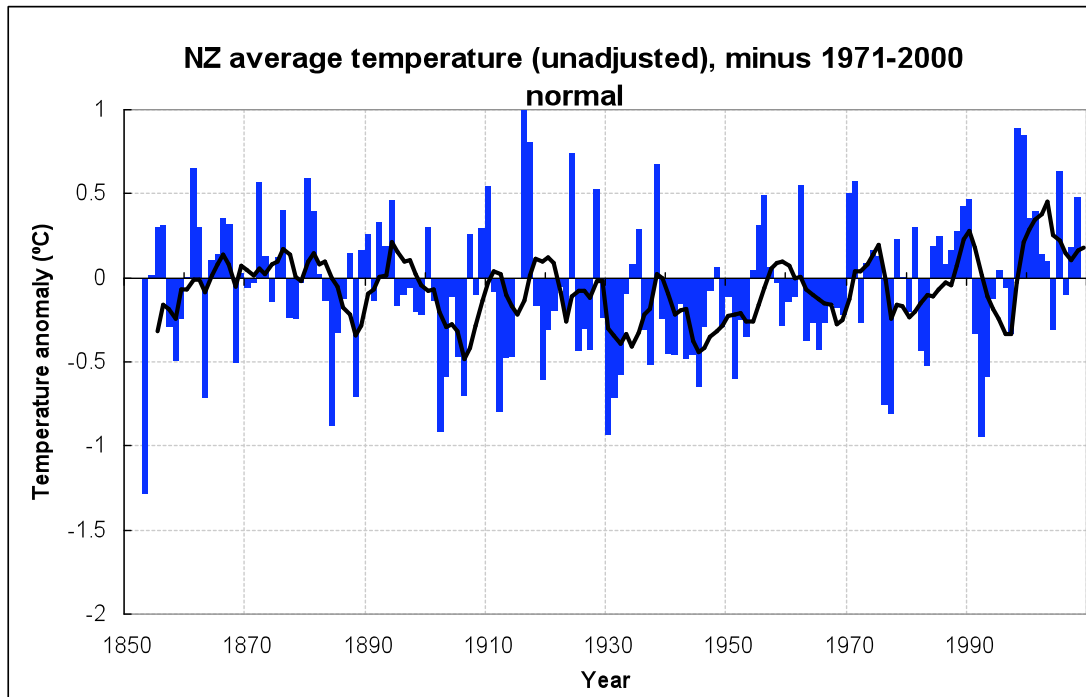
From NIWA's web site — Figure 7: Mean annual temperature over New Zealand, from 1853 to 2008 inclusive, based on between 2 (from 1853) and 7 (from 1908) long-term station records. The blue and red bars show annual differences from the 1971 – 2000 average, the solid black line is a smoothed time series, and the dotted [straight] line is the linear trend over 1909 to 2008 (0.92°C/100 years).

This graph is the centrepiece of NIWA's temperature claims. It contributes to global temperature statistics and the IPCC reports. It is partly why our government is insisting on introducing an ETS scheme and participating in the climate conference in Copenhagen. But it's an illusion.

Dr Jim Salinger (who no longer works for NIWA) started this graph in the 1980s when he was at CRU (Climate Research Unit at the University of East Anglia, UK) and it has been updated with the most recent data. It's published on NIWA's website at <http://www.niwa.co.nz/our-science/climate/information-and-resources/clivar/pastclimate> and in their climate-related publications.

The actual thermometer readings

To get the original New Zealand temperature readings, you register on NIWA's web site, download what you want and make your own graph. We did that, but the result looked nothing like the official graph. Instead, we were surprised to get this:



Straight away you can see there's no slope—either up or down. The temperatures are remarkably constant way back to the 1850s. Of course, the temperature still varies from year to year, but the trend stays level—statistically insignificant at 0.06°C per century since 1850.

Putting these two graphs side by side, you can see huge differences. What is going on?

Why does NIWA's graph show strong warming, but graphing their own raw data looks completely different? Their graph shows warming, but the actual temperature readings show none whatsoever!

Have the readings in the official NIWA graph been adjusted?

It is relatively easy to find out. We compared raw data for each station (from NIWA's web site) with the adjusted official data, which we obtained from one of Dr Salinger's colleagues. Requests for this information from Dr Salinger himself over the years, by different scientists, have long gone unanswered, but now we might discover the truth.

Proof of man-made warming

What did we find? First, the station histories are unremarkable. There are no reasons for any large corrections. But we were astonished to find that strong adjustments have indeed been made.

About half the adjustments actually created a warming trend where none existed; the other half greatly exaggerated existing warming. All the adjustments increased or even created a

warming trend, with only one (Dunedin) going the other way and slightly reducing the original trend.

The shocking truth is that the oldest readings have been cranked way down and later readings artificially lifted to give a false impression of warming, as documented below. There is nothing in the station histories to warrant these adjustments and to date Dr Salinger and NIWA have not revealed why they did this.

One station, Hokitika, had its early temperatures reduced by a huge 1.3°C, creating strong warming from a mild cooling, yet there's no apparent reason for it.

We have discovered that the warming in New Zealand over the past 156 years was indeed man-made, but it had nothing to do with emissions of CO²—it was created by man-made adjustments of the temperature. It's a disgrace.

NIWA claim their official graph reveals a rising trend of 0.92°C per century, which means (they claim) we warmed more than the rest of the globe, for according to the IPCC, global warming over the 20th century was only about 0.6°C.

Consequences

The unexplained changes to the official New Zealand temperature record cast strong doubt on the government's assertions of urgency regarding so-called "climate change". Using NIWA's public data, we have shown that global warming has not yet reached New Zealand (and what does that say for global warming?).

At a minimum, the adjustments made to the official NZ temperature record must be made public. NIWA's predictions regarding climate change, including changes in temperatures, precipitation, winds, storms and sea levels, must be re-examined in the light of the absence of any changes in temperature to date, from any cause.

New Zealand's contribution to the global statistics is now under a shadow, so there could be regional or even global implications of these disgraceful "adjustments" which should be investigated.

Now we must ask: do we really need an ETS? For, if all that "nasty" carbon dioxide and methane we are "pumping" into the atmosphere has utterly failed to increase our temperature until now, why ever should it do so in the future?

Coming soon

We analyse the adjustments made by the Global Historical Climate Network (GHCN) to temperature readings from around the globe and we ask: is this reasonable?

The facts and figures

Below are graphs showing both original and adjusted readings for each of the seven weather stations NIWA uses in its official graph. After the adjustments are made, the temperature trend at each station changes significantly. The seven stations Dr Salinger used to create the graph are (with start dates):

- Auckland (1853)
- Masterton (1906)
- Wellington (1862)
- Hokitika (1866)
- Nelson (1862)
- Lincoln (1863)

- Dunedin (1852)

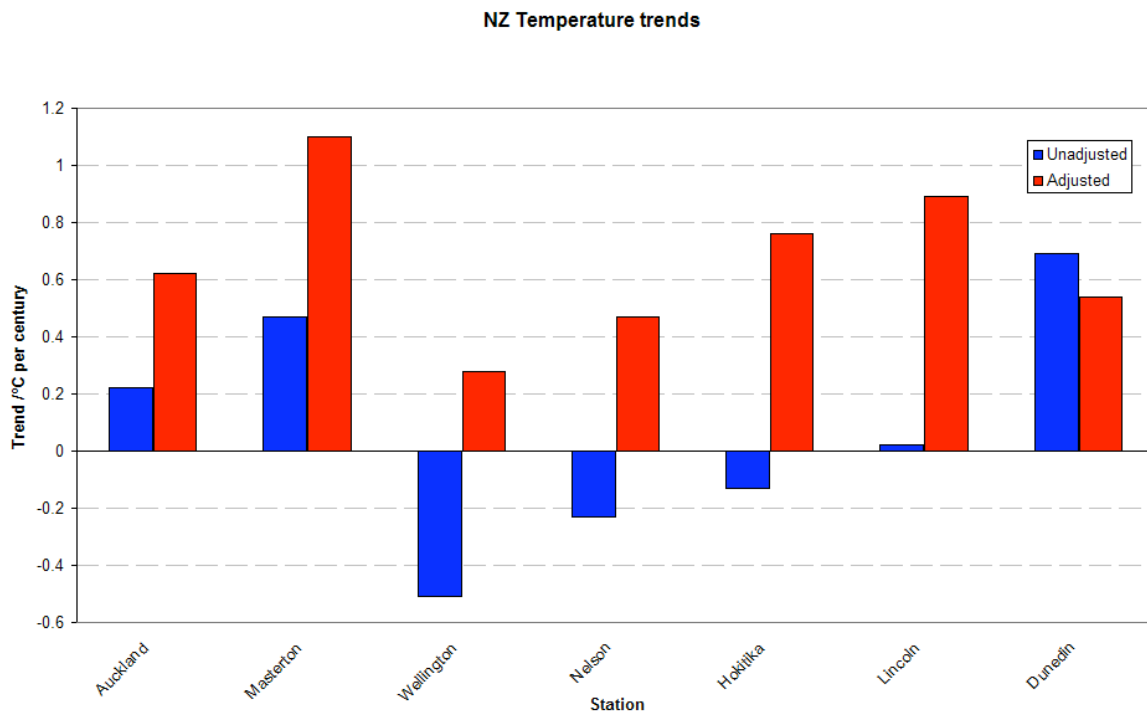
Find the one nearest your place! Are you feeling warmer yet?

Here are all the adjustments, expressed in degrees Celsius per hundred years:

Station	Trend: °C per century		
	Unadjusted	Adjusted	Difference
Auckland	+0.22	+0.62	+0.40
Masterton	+0.47	+1.10	+0.63
Wellington	-0.51	+0.28	+0.79
Nelson	-0.23	+0.47	+0.70
Hokitika	-0.13	+0.76	+0.89
Lincoln	+0.02	+0.89	+0.87
Dunedin	+0.69	+0.54	-0.15

Six of the seven stations have had their past (pre-1950) data heavily adjusted downwards. In all six cases this significantly increased the overall trend. The trend at the remaining station, Dunedin, was decreased, but the reduction was not as great as the increases in the other six.

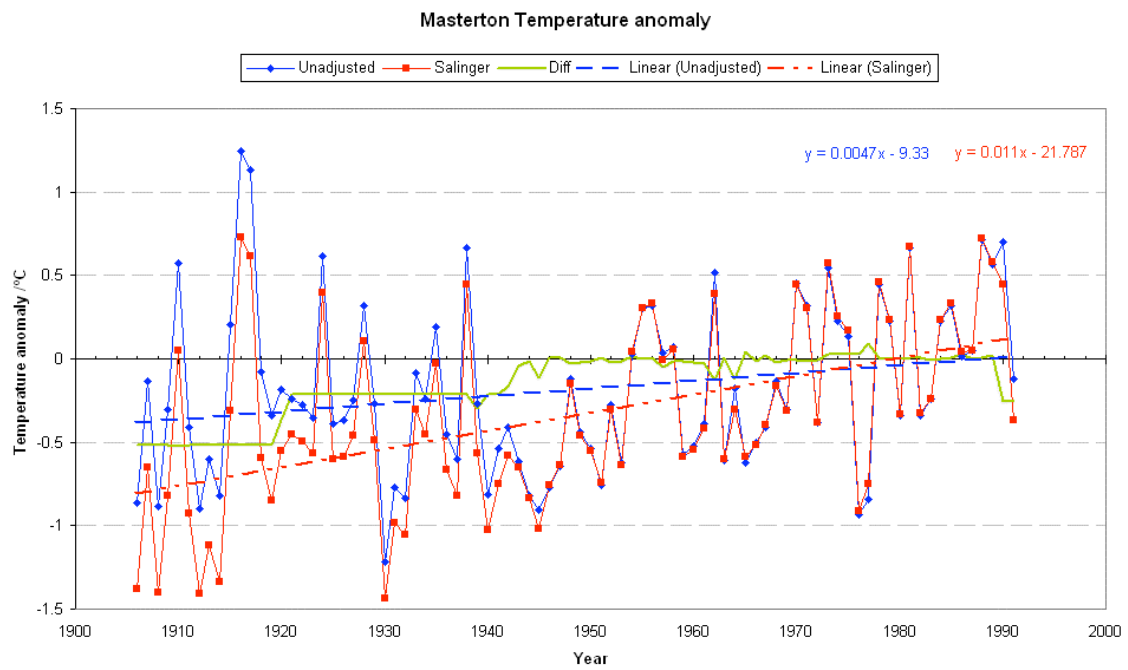
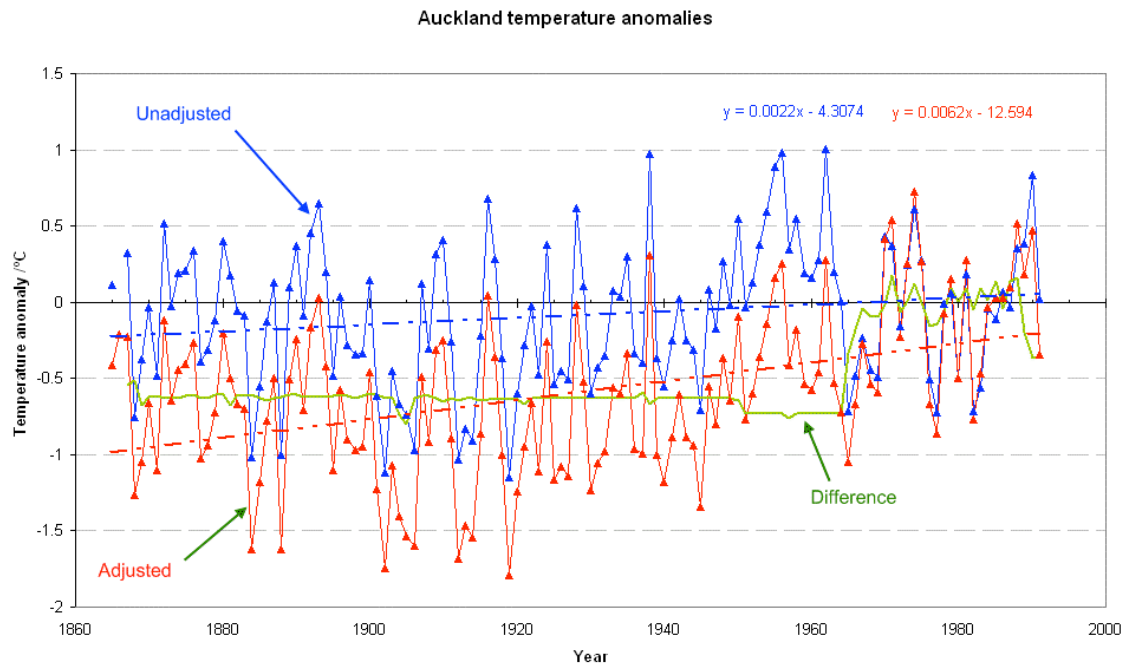
This graph helps to picture the differences. Note that, after adjustment, every station shows a warming trend, although, originally, three showed cooling and one (Lincoln) showed no trend. In every case, apart from Dunedin, a warming trend was either created or increased. It is highly unlikely this has happened by mere chance, yet to date Dr Salinger and NIWA refuse to reveal why they did it.



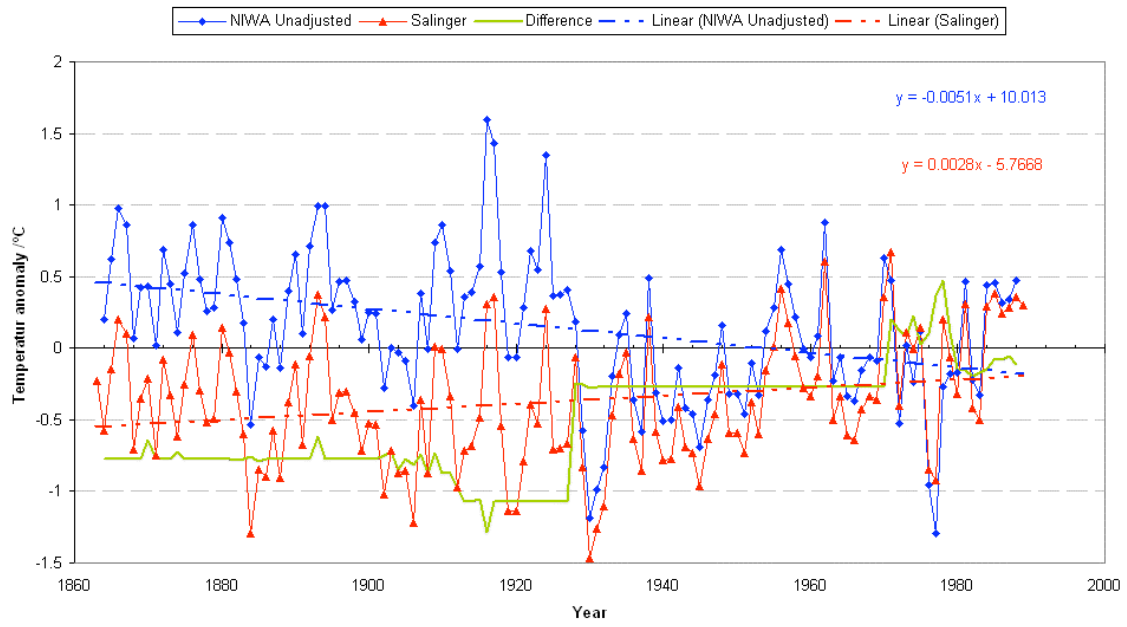
Comparisons at each station—before and after

The following graphs dramatically show the effect of the adjustments NIWA applied to the raw temperature readings. The important thing to note is the difference in the slopes of the two

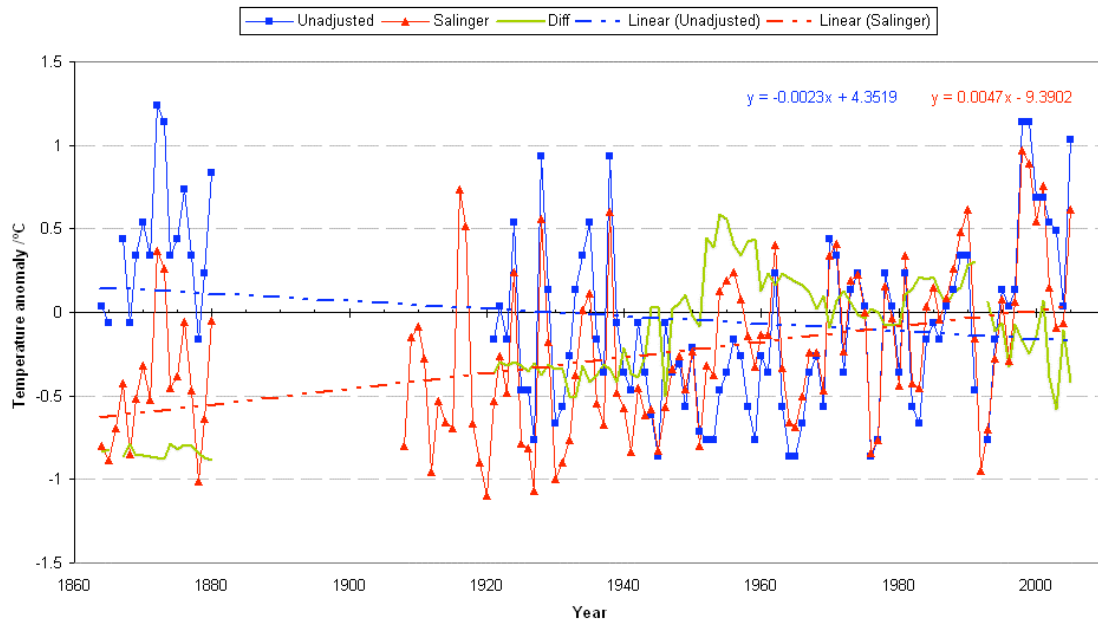
trend lines, unadjusted (blue) and adjusted (red). When the slope becomes a climb, or gets steeper, from left to right it means they created warming or made it stronger.



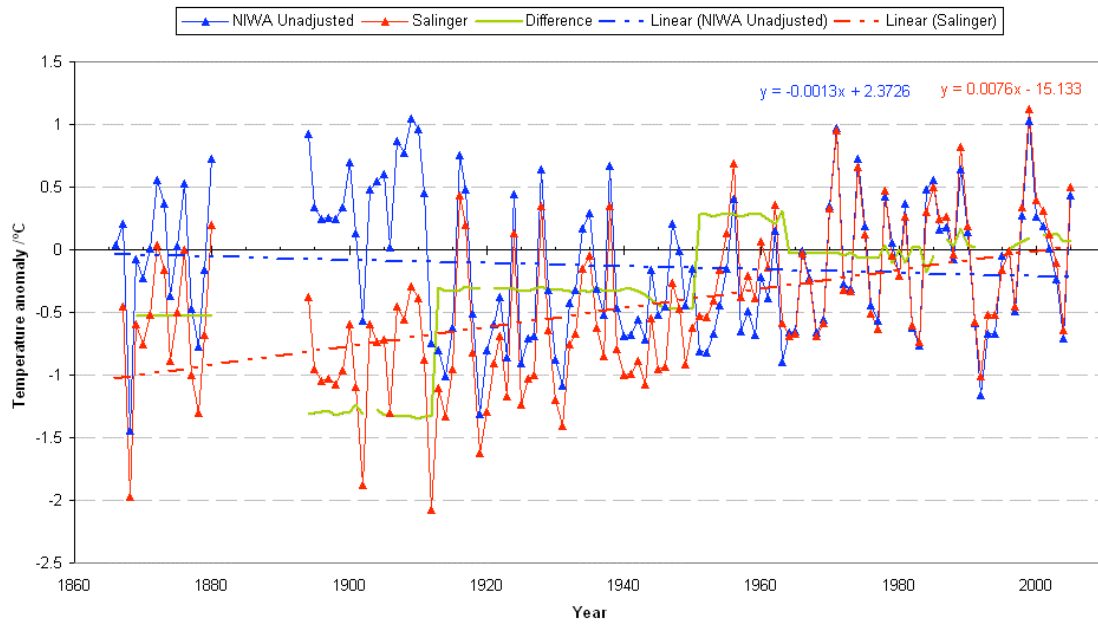
Wellington Temperature anomaly



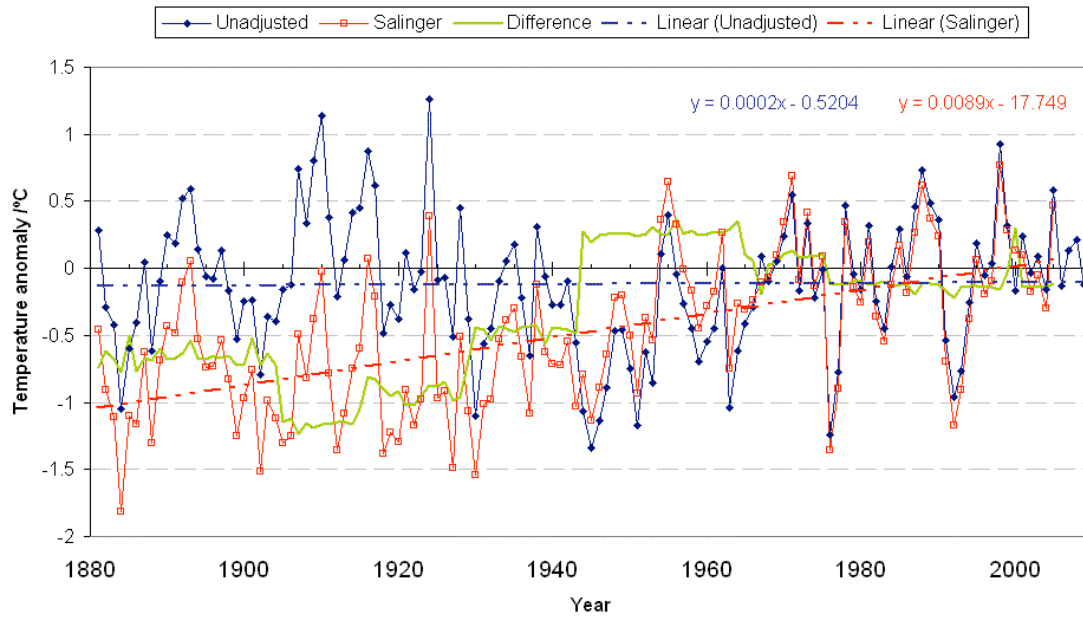
Nelson Temperature anomaly



Hokitika Temperature anomaly



Lincoln Temperature anomaly



Dunedin Temperature anomaly

