

Global warming trend unaffected by 'fiddling' with temperature data

February 18 2015, by Neville Nicholls



Despite adjustments to temperature data in the Arctic, the overall global warming trend remains the same. Credit: Flickr/P J Hansen, CC BY-SA

Attacks on institutions that keep records of global temperatures, such as [NASA](#), the US [National Oceanic and Atmospheric Administration](#), the UK [Met Office](#), and Australia's [Bureau of Meteorology](#), [continue to appear in the press](#).

Recent articles have raised concerns about the temperature record in [Paraguay](#) and the [Arctic](#). The Australian newspaper has published a [series of articles](#) on similar concerns about the Australian Bureau of Meteorology's temperature [data](#).

The thrust of these articles is that data adjustments, made to correct for biases caused by changes in location, exposure or instrumentation, have exaggerated the apparent [warming](#) trend.

A bemusing debate

For the scientists who identify, and adjust for, these biases in regional, national, or global climate records, this sudden burst of interest in our work is both bemusing and gratifying.

When this work began 25 years or more ago, not even our scientist colleagues were very interested. At the first seminar I presented about our attempts to identify the biases in Australian [weather data](#), one colleague told me I was wasting my time. He reckoned that the raw weather data were sufficiently accurate for any possible use people might make of them.

I begged to differ and my colleagues and I continued the work to document how the Australian climate had been changing. So now I'm chuffed that there is sufficient interest in the climate to have a public debate about the data and what climate scientists do with them.

In the old days those of us involved in this "rehabilitation" of weather data to monitor the climate published our methods and results in obscure meteorological journals, unknown and ignored by the public. Nowadays, as a result of the increased media interest, you can find descriptions of our work and results in blogs and the data (the [raw data](#) as well the adjustments needed to correct for biases) are freely available to anyone with an internet connection.

Arctic answers

The ready availability of the data, and the [public debate](#), has encouraged

other groups to improve on the efforts of the old timers. Among them is [Kevin Cowtan](#) from the University of York, UK, who is producing videos explaining how to access the raw and adjusted data and check what adjustments have been made, and what effect these adjustments make to the historical record of regional and global surface temperature. Cowtan, besides his expertise in computer crystallography, has some highly-regarded [climate data science publications](#) to his credit.

And his conclusions? That the adjustments (and there are a large number of them, to be sure) make essentially no difference to the global pattern of warming we have seen over the past century or so.

In some regions, the adjustments have tended to decrease the warming seen in the raw data, while elsewhere the adjustments increase the apparent warming (usually for well understood reasons and biases in the raw data).

But on a global scale the adjustments make almost no difference to the pattern of warming. The same conclusion has been reached by another group of "newbies" at [Berkeley Earth](#).

So was my critic 25 years ago correct? Have we wasted our time trying to identify biases in the weather and climate data, and taking these into account in the time series of regional and global [climate](#)?

In one sense he was – despite all our work the warming trend hasn't been changed. So we could have simply used the raw data to calculate [global warming](#) over the past century.

But at least we know that biases in the raw data, such as the warming caused by increased urbanisation, have not "caused" global warming. Nor have the adjustments that have been applied to correct for [biases](#) caused by changes in instrumentation, exposure, and location.

This story is published courtesy of [The Conversation](#) (under Creative Commons-Attribution/No derivatives).

Source: The Conversation

Citation: Global warming trend unaffected by 'fiddling' with temperature data (2015, February 18) retrieved 20 March 2024 from <https://phys.org/news/2015-02-global-trend-unaffected-fiddling-temperature.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--