

NZCLIMATE TRUTH NO 192

6 DECEMBER 2008

CORRECTING THE FIGURES

Yesterday in the "Dominion Post" in an article from Peter Barrett we were subjected once more to the scare of the "Mean Surface Global Temperature Anomaly" which claims to show a temperature rise over the past century of almost one degree. This is given as proof that we are now, inevitably, about to witness the "collapse of the biosphere" as an article by George Monbiot in my current "Guardian Weekly" puts it.

Nobody seems to notice that most of the increase took place before greenhouse gases in the atmosphere had started to increase, and the temperature increase only took place over the years 1976 to 1998. The greenhouse gases decided not to operate before that, or afterwards.

Most readers would have failed to realise how inaccurate this record is, so it is of interest to see the results of a recent attempt to apply partial "corrections", in a paper by

David W. J. Thompson¹, John J. Kennedy², John M. Wallace³ & Phil D. Jones⁴

A large discontinuity in the mid-twentieth century in observed global-mean surface temperature

Nature 453, 646-649 (29 May 2008) | doi:10.1038/nature06982; Received 28 January 2008; Accepted 4 April 2008.

The paper shows that an important change in the measurement of sea surface temperature after 1940 led to a sudden fall in temperature of around 0.3°C.

This resulted from a change from measurement from uninsulated buckets drawn from the sea to measurement at the engine intake. This transition was sharp as there was a sudden change from measurements mainly from UK, German, Netherlands and Japanese ships which used buckets, to US ships which used engine intake. This is shown by the attached graph from

Climate change: Hot questions of temperature bias. Chris E. Forest¹ & Richard W. Reynolds

Nature 453, 601-602 (29 May 2008) | doi:10.1038/453601a; Published online 28 May 2008

The implications of the temperature discontinuity implies that the previous non-insulated bucket measurements were 0.3°C too high, compared with the subsequent engine intake measurements which are not on the surface, but are at least a meter below it. Yet these measurements are also suspect and must surely be influenced by the temperature of the ships which have increased over the years. This has actually been shown to be true by comparison between temperature measurements from fixed buoys and engine intakes, in

Christy, J R , D E Parker, S J Brown, I Macadam, M Stendel & W B Norris 2001. "Differential Trends in Tropical Sea Surface and Atmospheric Temperatures since 1979" Geophysical Research Letters 28 183-186.

It is evident that most of the supposed "warming" shown in sea surface temperatures is an upwards bias caused by changes in the methods of measurement.

The Thompson et al. paper is rather confusing, as they feature this discontinuity, but do not take measures to apply a "correction" for it, which may possibly show up in subsequent records.

They do make the discrepancy clearer by applying two corrections to the existing record, as shown in the attachment.

The top graph gives the currently accepted record, but it consists of monthly results which are averages of weekly averages of daily readings instead of the usual annual figures, which are averages of averages of monthly averages of weekly averages of daily readings.

This plot gives an idea some of the uncertainties which are not evident on the annual graph.

The corrections chosen were monthly functions of ENSO and COWL, .

ENSO is the El Niño/ Southern Oscillation , a persistent ocean change. Its removal immediately deflates the 1998 temperature high which is usually claimed to be the highest on record, and therefore to be a proof of the influence of greenhouse gases. The corrected record shows that global temperature were constant from 1998, and, as I pointed out in Newsletter 191 , the recent fall in temperature takes us back to 1995 for a period of no overall change .

COWL is a bit more complicated. It stands for Cold Oceans Warm Land Pattern. It is the result of winter wind behaviour in the Northern Hemisphere where warm air over land heats the land because of its higher heat capacity more than the cold air does over the sea thus exaggerating measured air temperatures.

The "Residual" graph not only shows the 1940 discontinuity much more clearly, but it almost disposes of the apparent slight fall in temperature between 1945 and 1976 which the models had such difficulty to explain. However, they still have the difficulty of explaining why there was no temperature rise at a time when the greenhouse gases were rising.

There are other "corrections" which they do not attempt. For example. the Pacific Decadal ocean Oscillation correlates closely with everything from 1930 to 1990.

The effects of volcanic eruptions are shown by Briffa et al Nature 1998 393 450-454

McKittrick and Michaels, who have shown strong socioeconomic influences between 1976 and 2000. at

McKittrick, R.R. and P.J. Michaels, 2007, Quantifying the influence of anthropogenic surface processes and inhomogeneities on gridded global climate data, *J. Geophys. Res.* 112, D24S09, doi:10.1029/2007JD008465

If you try to remove all of these corrections there will be very little left that could be pinned on greenhouse gases, and of course, as I pointed out, any possible influence on temperature has now gone, anyway.



