Forum on Climate Change – Noosa, July 2015
'Exposing the myths of climate change'

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My thesis today is that there is minimal risk that temperatures will become dangerously high if there is continued use of fossil fuels. And no sound basis exists for governments to continue with expensive policies aimed at reducing their usage. Fossil fuels are by far the cheapest energy source.

Drawing on advice by physicist Tom Quirk and the former head of Australia's National Climate Centre, meteorologist Bill Kininmonth, I am presenting new research questioning the dangerous warming thesis. Many thousands of scientists now reject that thesis.

The dangerous warming theory is based, first, on the retention in the atmosphere of some CO2 from usage of fossil fuels. Second, that retained CO2 radiates heat back to earth, which then increases temperatures.

However, evaporation absorbs some of the heat and this reduces the "greenhouse" effect. Recent research also indicates that the quantity of fossil fuels staying in the atmosphere is much less than previously thought.

What Has Happened to Temperatures and Fossil Fuel Emissions

Believers in the dangerous warming thesis also face another problem. As Figure 1 shows, there has been no correlation since 1920 between changes in temperatures and changes in CO2. That contradicts the whole thesis.

Looking at Figure 1, we see a dark blue line showing relatively stable temperatures not only from 2000 to the present but from 1948 to 1977 as well. But the brown line shows CO2 concentration levels increasing quite strongly over both these periods.

Figure 1 does also show that both temperatures and CO2 concentration levels increased together from 1977 to 2000. But this was mainly due to the Pacific Decadal Oscillation. This had no causal connection with emissions of C02. It reflected *natural* causes arising from the replacement of cold water along the western Pacific coast of the North Americas.

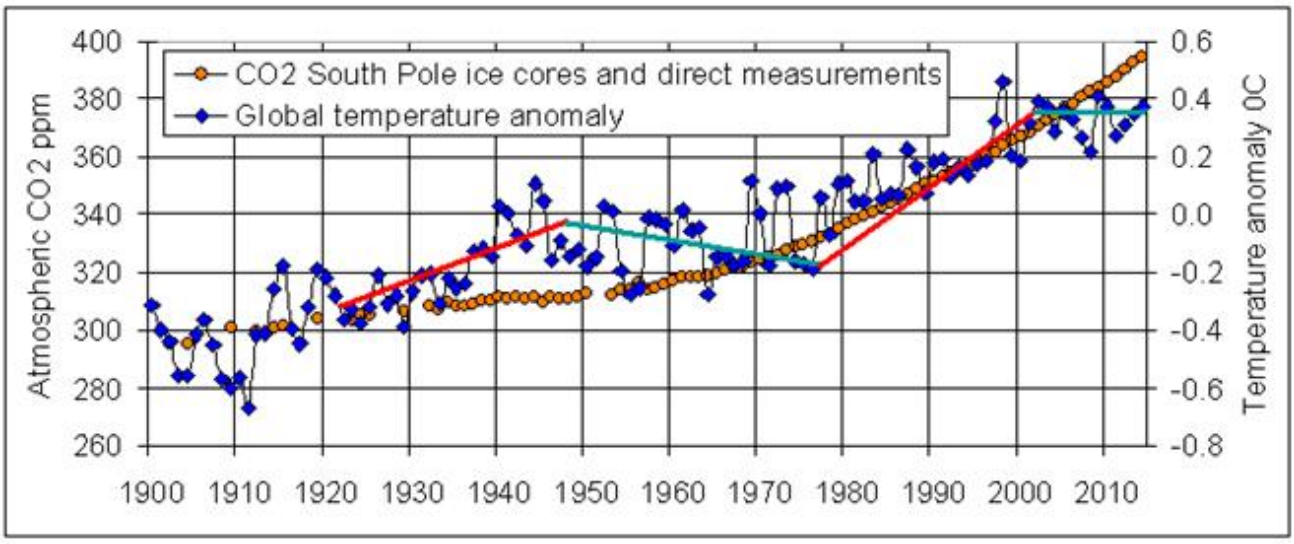


Figure 1: *CO2 measurements at the South Pole from ice cores and direct measurements and the global temperature anomaly .The continuous line marks the periods of the Pacific Decadal Oscillation. For the actual global temperatures 15^{0}C should be added to the anomaly (HadCRUT4)*

Table 1: Variations in temperature and atmospheric CO_2

PERIOD	Pacific Decadal Oscillation Phase	Global Temperature °C increase per 10 years	CO_2 at the South Pole Annual increase in ppm
1922 – 1947	Warm	0.13 +/- 0.02	0.40 +/- 0.03
1948 – 1976	Cool	-0.02 +/- 0.03	0.85 +/- 0.03
1977 – 2000	Warm	0.12 +/- 0.03	1.49 +/- 0.01
2001 – 2014	Cool	0.00 +/- 0.04	1.97 +/- 0.02

Accuracy of Temperatures

There are also serious questions about the accuracy of the temperatures published by official agencies and used by the IPCC.

First, temperatures are calculated only by averaging the minimum and maximum. That may seem the obvious way of calculating the average. But it is not. If the average is calculated accurately from temperatures recorded every 30 minutes, we see a lower average increase.

For example, Figure 2 compares temperatures in coastal Cairns and desert Alice Springs. In Cairns, the averaging of the minimum and maximum produces temperatures about 0.6C higher than if the daily averaging is done on a 30 minute basis. This is illustrated by comparing the dotted red line in the left hand

graph with the black line average of minimum and maximum. For Alice Springs there is virtually no difference between the two averaging methods. Across Australia, the miscalculation of coastal and inland temperatures produces an overall **upward bias** in Australian temperatures of 0.3-0.4C.

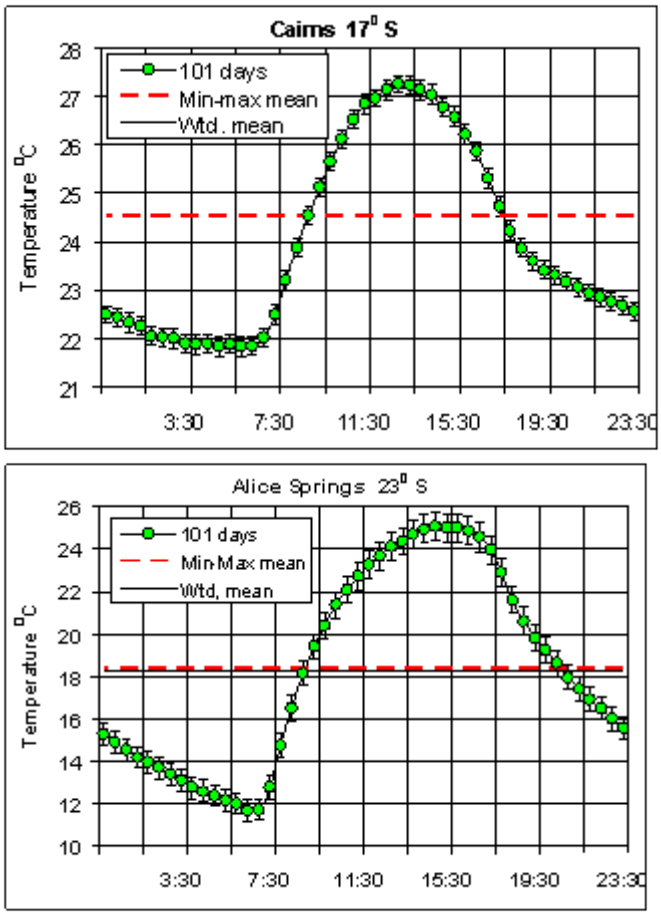


Figure 2: *Temperatures measured at 30 minute intervals through a 24 hour day. The solid* ***black*** *line is the weighted average of readings every 30 minutes. The dashed* ***red*** *line is the average of the minimum and maximum temperatures*

Figure 3 comparing maximum and minimum temperatures at the BOM office in central Melbourne with those at Laverton also reveals an upward bias in published temperatures. The publication of higher minimum temperatures for Melbourne than Laverton indicates that adjustments are not made for Melbourne for the heat island effect which keeps temperatures up when recorded in large built up urban areas.

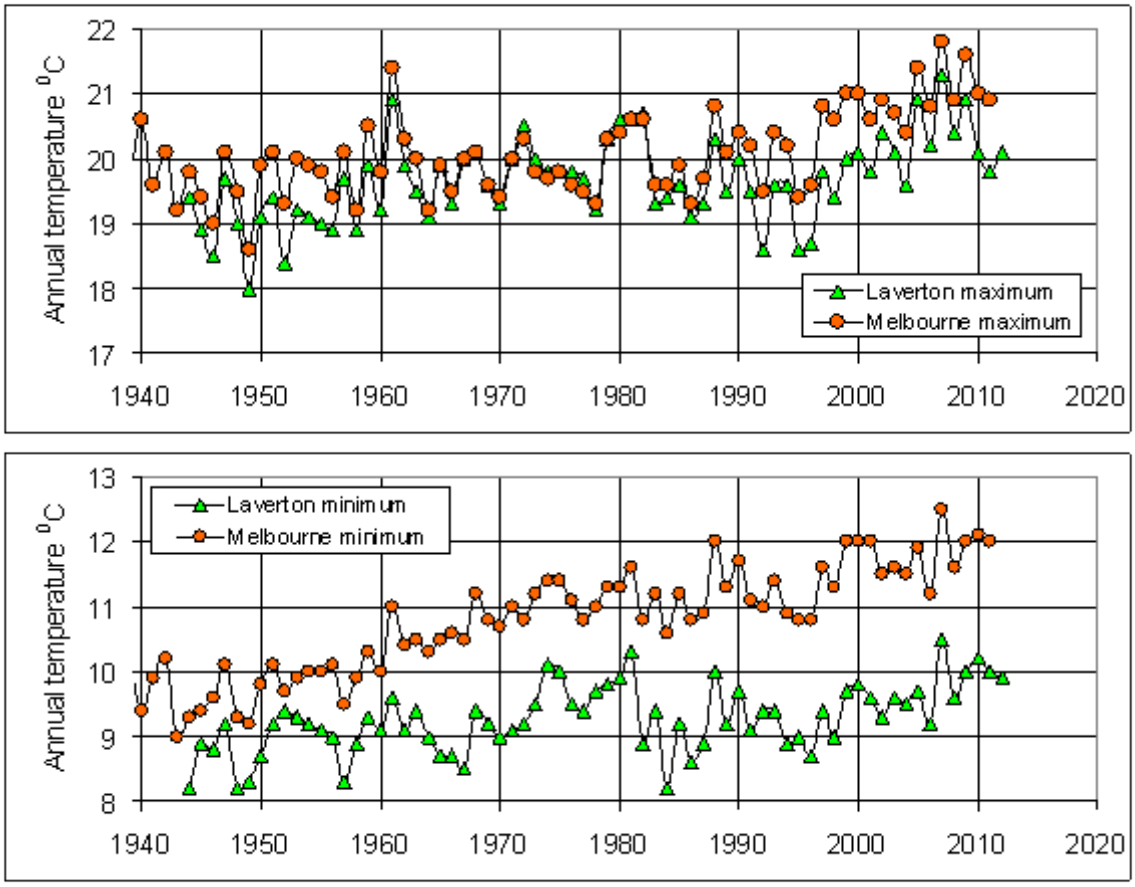


Figure 3: *BOM records of direct maximum and minimum temperatures at the BOM office in central Melbourne and at Laverton airport. The central Melbourne minimum would be much lower if account was taken of the urban heat effect.*

A recent review of temperature records of Australia's Bureau of Meteorology also indicated that there was uncertainty about the *adjustments* made to "raw" temperatures by the BOM. Submissions by independent experts claimed the adjusted temperatures had an upward bias.

My conclusion is that about half of the claimed temperature increase of about 0.8C of a degree since about 1900 is incorrectly calculated and the other half may well reflect natural causes.

Droughts and Rainfall

Claims are made by believers in the dangerous warming thesis that Australia is already experiencing lower rainfall and increased droughts. But Figure 4 shows that there is no statistically significant change in the Murray Darling Basin rainfall since 1900. Past Australian droughts occurred when global temperatures were lower than now and wetter years occurred when such temperatures were rising. There is no reason to expect that to change.

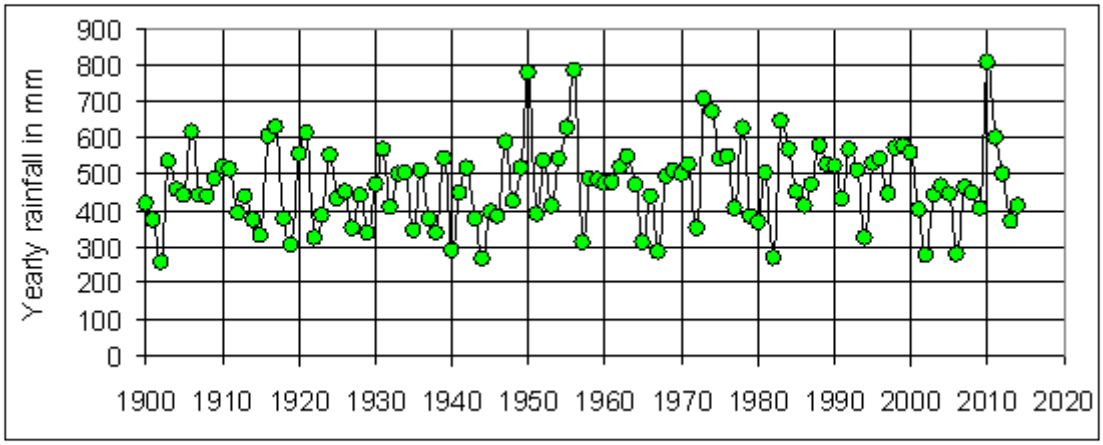


Figure 4: *Yearly rainfall in the Murray-Darling Basin. Average value is 470 mm. There is no significant trend in rainfall through this period but with large variability- standard deviation of 111 mm with rainfall extremes of a minimum 258 minimum in 1902 and a maximum of 809 mm in 2010*

Antarctic and Arctic Ice Sheets –Sea Levels and the Reef

Sea levels have been increasing over recent years and, if higher temperatures caused large land-based ice sheets and glaciers to melt, sea levels would rise further and low-lying land would become more susceptible to flooding. However, IPCC reports have predicted much higher sea levels than actually occurred. Satellite measurements of sea levels from 1992 show that a continuation of an average rate of increase would result in levels about 30 centimetres higher by 2100. Most residences would readily be able to protect themselves against such an increase.

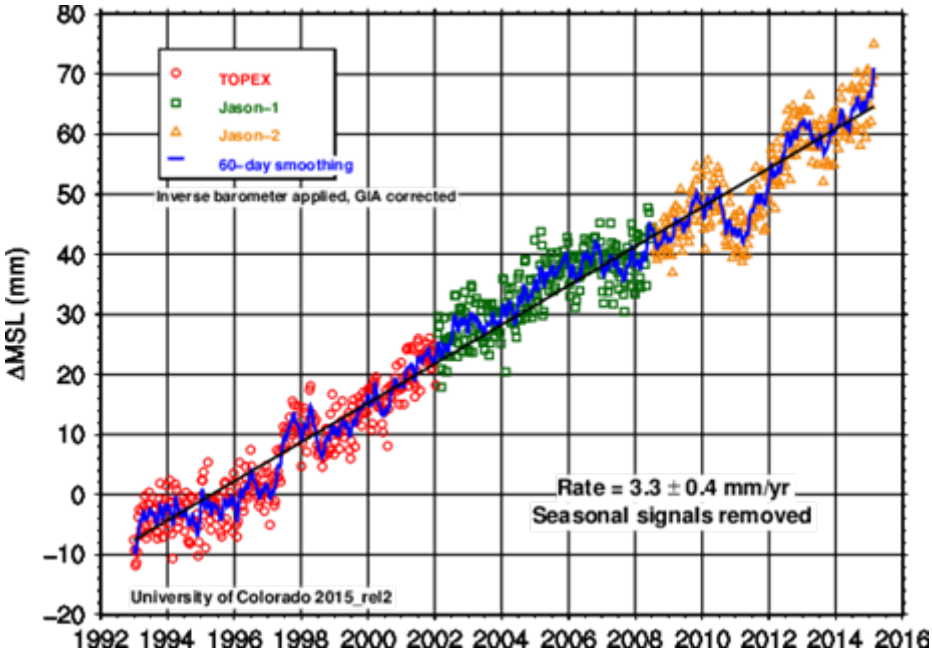
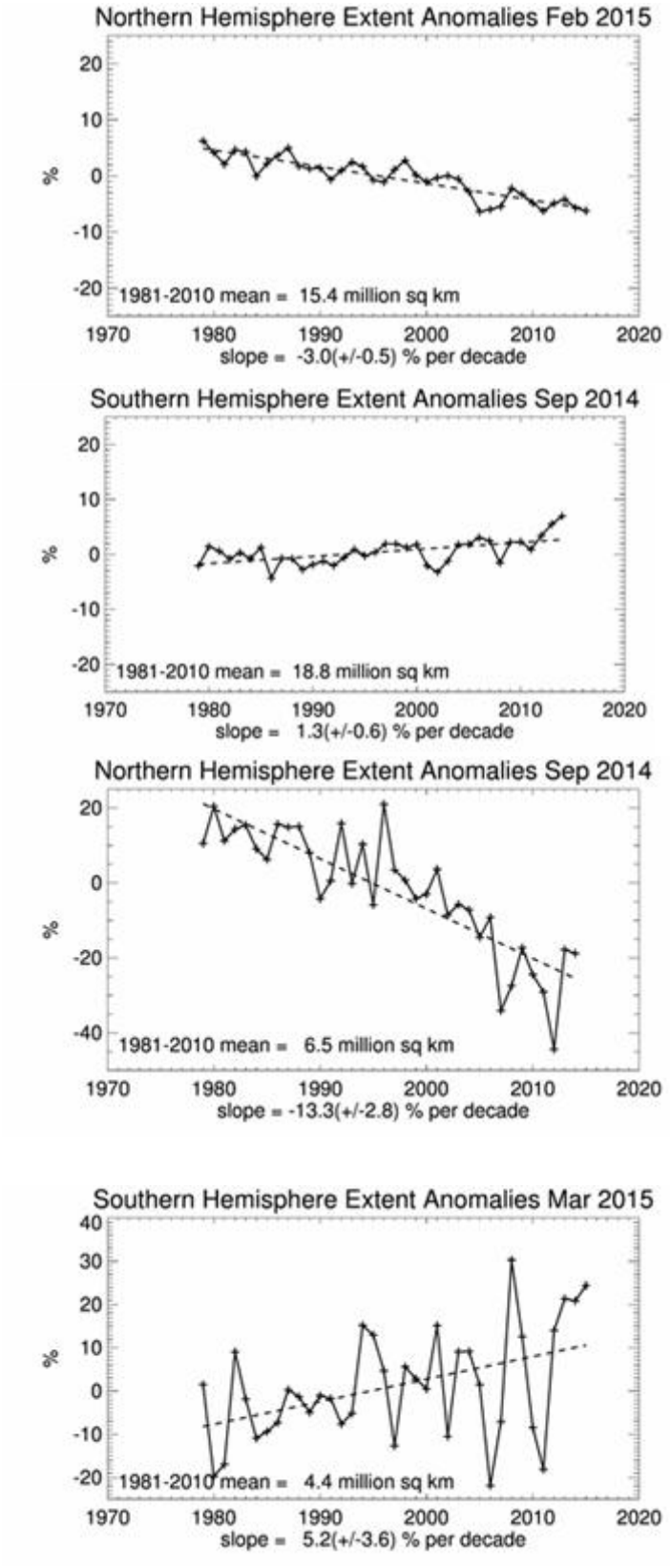


Figure 5: *The global mean sea level graph was made using satellite altimetry and processed by the University of Colorado at Boulder. Note that the rate of increase is 3.3 +/- 0.4 mm/year for1992 to 2015 If the rate of increase continues at about 3 mm a year, sea levels would reach about 30 cm in 2100. That is consistent with the IPCC's projection of 19-59 cm by 2100 and would not involve any significant flooding of low lying lands. . If the rate of increase continues at about 3mm a year, in 2100 average sea levels would be about 30cm higher than now/ Note the apparent influence of the 1997-98 El Nino.*

Account also needs to be taken of whether sea levels are increasing because of meltings of ice levels at the Arctic and Antarctic. Figure 6 does show decreased ice levels in the Arctic but these have no effect on sea levels because the ice there is already floating in the sea. In the Antarctic, the total ice area there has been increasing and recently reached record levels. Satellite data covering the past thirty years show a distinct cooling of the Antarctic region.

Changes in Northern and Southern Icecaps



Maximum Minimum

Figure 6: *Arctic and Antarctica ice extent. The maximum extent occurs in February in the Northern Hemisphere and in September in the Southern Hemisphere. Summer minima occur in September and March. The Northern Hemisphere ice extent is decreasing with reducing maximum and minimum extent. Note that the slopes for the fitted straight lines give the change per decade*

As to the Great Barrier Reef, alarmism by conservation bodies has recently been shown to be unwarranted by the declaration of an international heritage agency that the reef is not in danger of destructive bleaching. Any action by Australia to reduce emissions of fossil fuels would not help to protect the reef unless there is an effective international agreement by major emitters.

Temperature Measurements and Predictions

A key temperature test is to examine the IPCC predictions calculated by modelling. Figure 7 shows that none of the supposed expert modelling used by the IPCC as a basis for its predictions coincides with actual temperatures published and shown in the figure as *observations*. The published measured temperatures are much lower than the model predictions. Various explanations are given of the failed predictions but none of these are convincing.

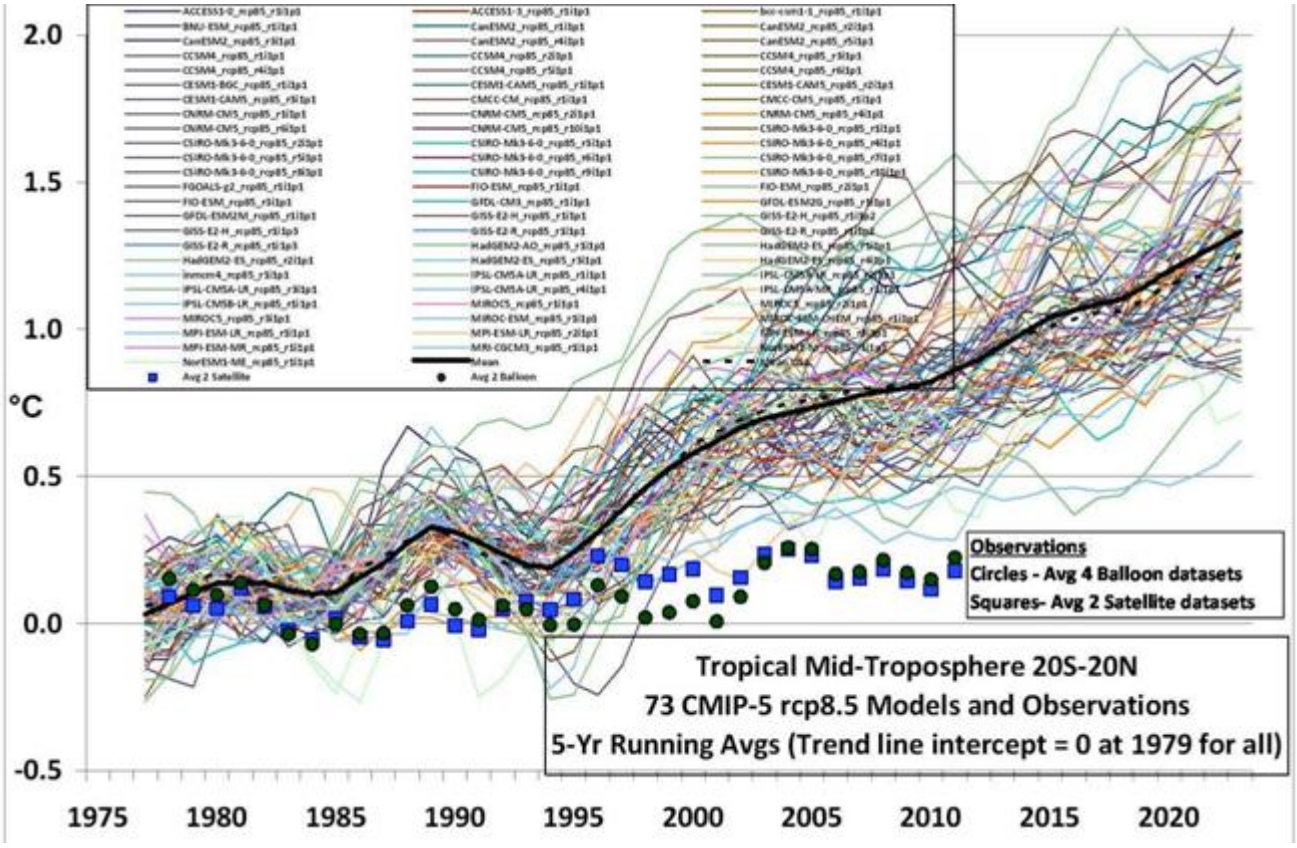


Figure 7: *A comparison of modelled and actual measured temperatures by Roy Spencer, University of Alabama at Huntsville. The solid continuous black line is the average temperatures from 73 computer models. The circles and squares are temperature observations from balloons and satellites. The published measured temperatures are much lower than the model predictions.*

Conclusion

In conclusion, my assessment is that there are fundamental faults in the statistical and scientific analyses used to justify the need for early and comprehensive mitigatory action by governments. The best policy for governments, businesses and individuals is to adapt to changes in climate as they occur.