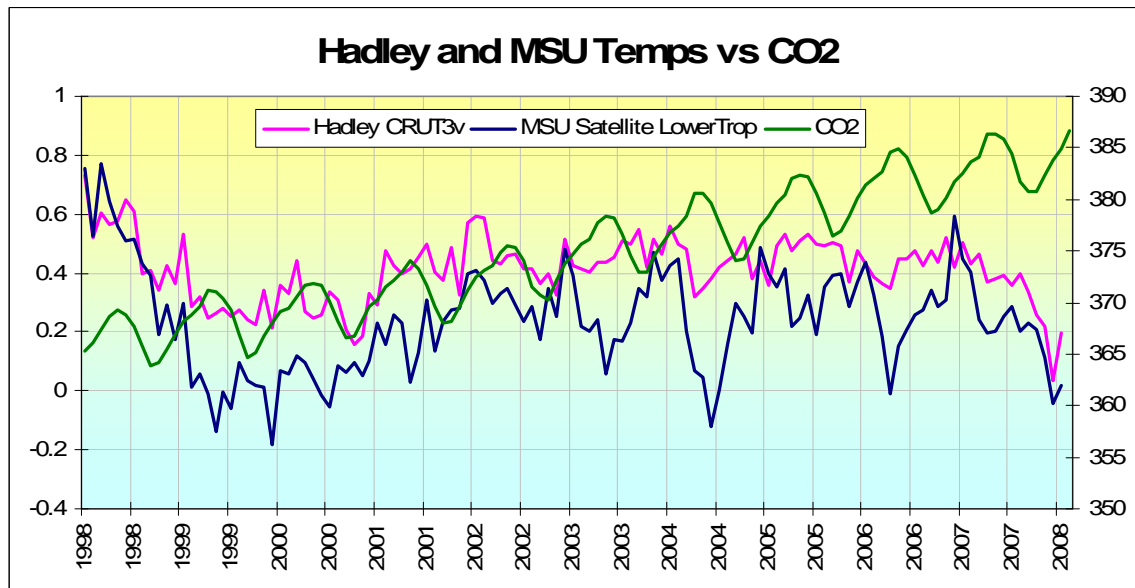*Correlation Last Decade and This Century CO2 and Global temperatures Not There*

This is the latest decadal plot from February 1998 to February 2008 of global temperatures from Satellite (UAH MSU lower troposphere) (blue) and land and ocean variance adjusted surface (Hadley CRU T3v) (rose) plotted with Scripps monthly CO2 from Mauna Loa (green).

The decadal correlation strengths (r-squared) of both the Hadley and MSU satellite with the corresponding CO2 is non-existent (r^2=0.00). If you start in 2000 at the coldest point of the last decade, this does not significantly change (r^2=0.01 for the Hadley and r^2=0.08 for MSU).

These numbers also do not change if you use the Scripps seasonally adjusted CO2 values (r^2=0.00 for both the decadal Hadley and MSU). The correlation since 2000 stays at r^2=0.01 for the Hadley but drops to r^2=0.05 for the MSU using this seasonally adjusted CO2.
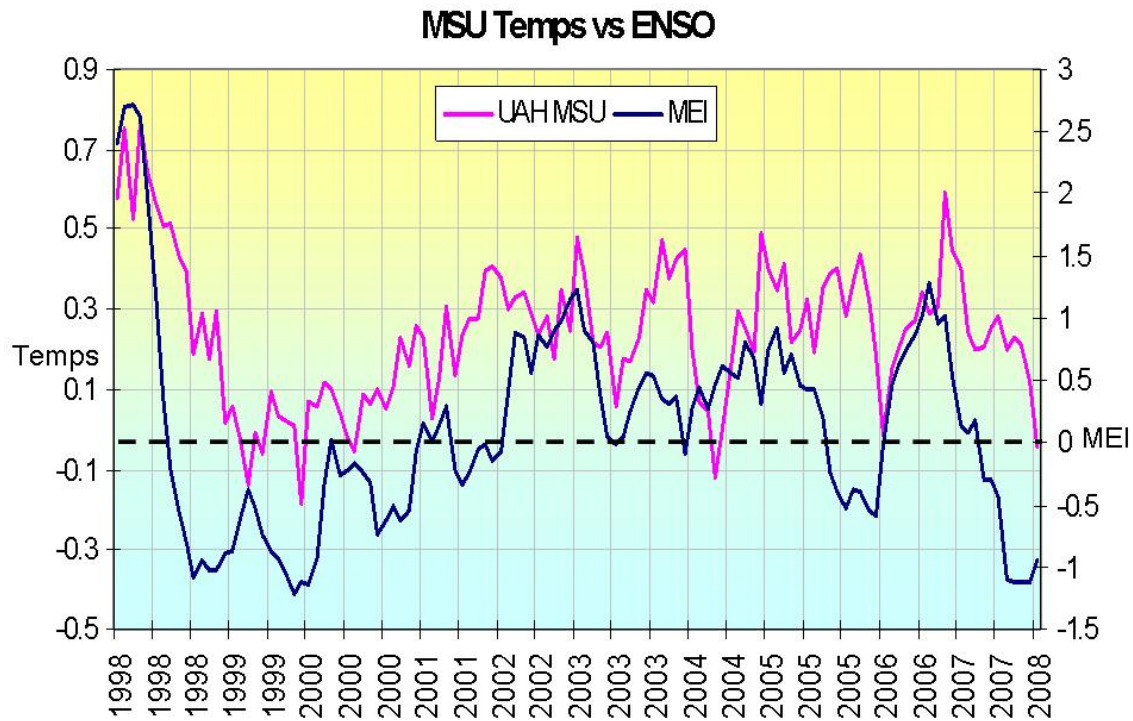
Hadley and MSU Temps vs CO2
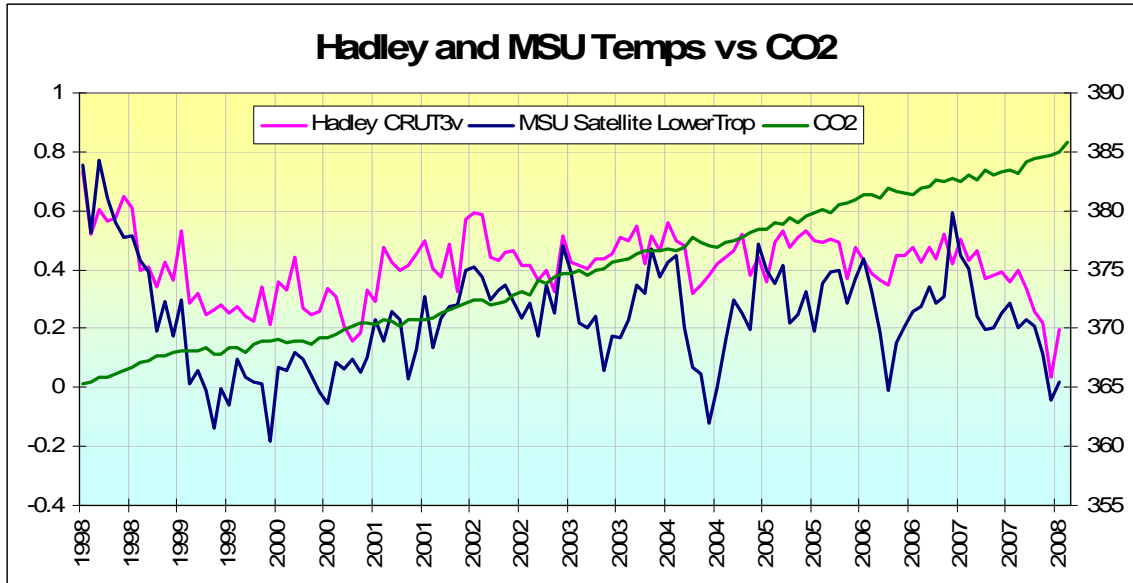
The challenge of course will be that a decade (or 7 years) is not a fair test, longer term monitoring is required to determine real trends. My response is that we are being told by Al Gore and James Hansen that the problem is worse than the IPCC and the scientists feared. That we are rapidly nearing the tipping point and that unless we take painful action immediately, temperatures will run away from us. It doesn't take an advanced science degree to see there has been virtually no trend in the temperature data in the last decade or this century even as CO2 has increased 5.5%.

Even the IPCC head Rajendra Pachauri has noticed the disconnect and acknowledged we have to look and see if natural forces were somehow countering greenhouse warming.

ENSO CORRELATION ON THE OTHER HAND

Meanwhile, the temperatures can be seen to fluctuate with the ENSO cycle very nicely with El Ninos causing spikes in the temperatures and the La Ninas dips.

UAH MSU Monthly Temperatures (C)

Using Wolter's Multivariate ENSO Index (MEI) monthly values plotted against the UAH MSU we see that correlation with some tendency for global temperatures to lag the MEI.

MSU Temps vs ENSO

The month to corresponding month correlation strength ($r^2 = 0.36$), much better than the CO2.

This year's precipitous drop in temperature like the one from 1998 to 1999 shows how important ocean temperatures are to GLOBAL temperatures. The argument for there being cycles in temperatures as opposed to a steady linear trend is that the multidecadal cycles in the oceans, specifically the Pacific Decadal Oscillation or PDO determine the tendency for ENSO and ENSO has a very obvious effect on global temperatures. That was shown in the last decade above and over the entire satellite era in the graphic below. It should be noted that the satellite era has fallen entirely within the latest warm mode of the PDO, which started in 1977. Note the dominance of El Ninos in the warm PDO.

Lower Troposphere Temperature [°C]
As Measured by NOAA Satellites

Variations from average [°C]
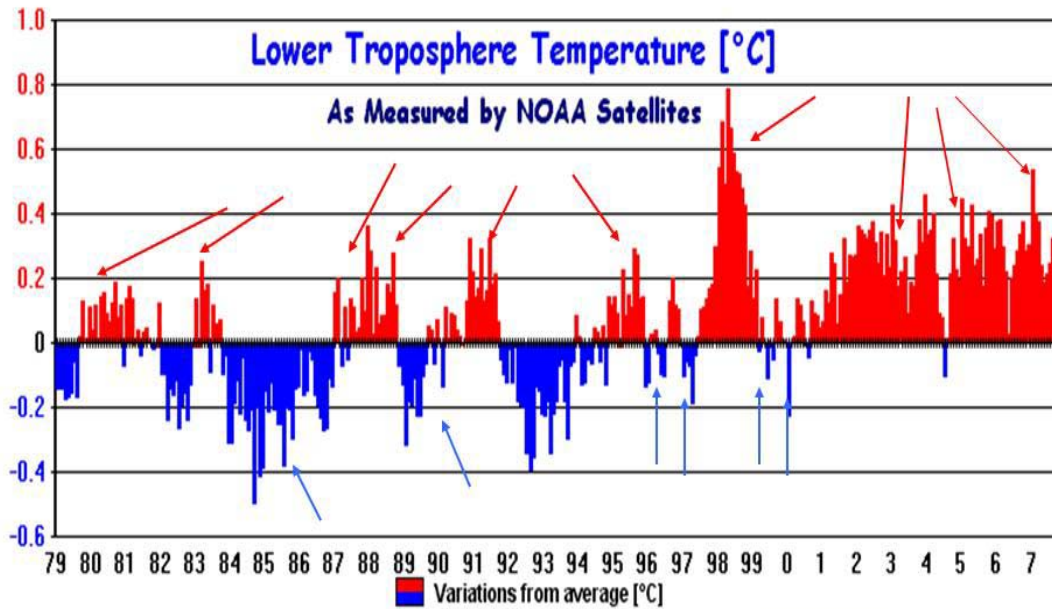
(NASA GISS)

*El Ninos lead to global warming and La Ninas to cooling*

If we have entered a new regime of the PDO (back to the cold mode as we experiences from 1944 to 1977), we might expect many more of these La Ninas and fewer El Ninos as we found during the last cold mode when temperatures globally declined. That of course would imply, temperatures have peaked and will decline. Add to that the growing prospects of quiet solar cycles 24 and 25 and you have a recipe for global cooling.
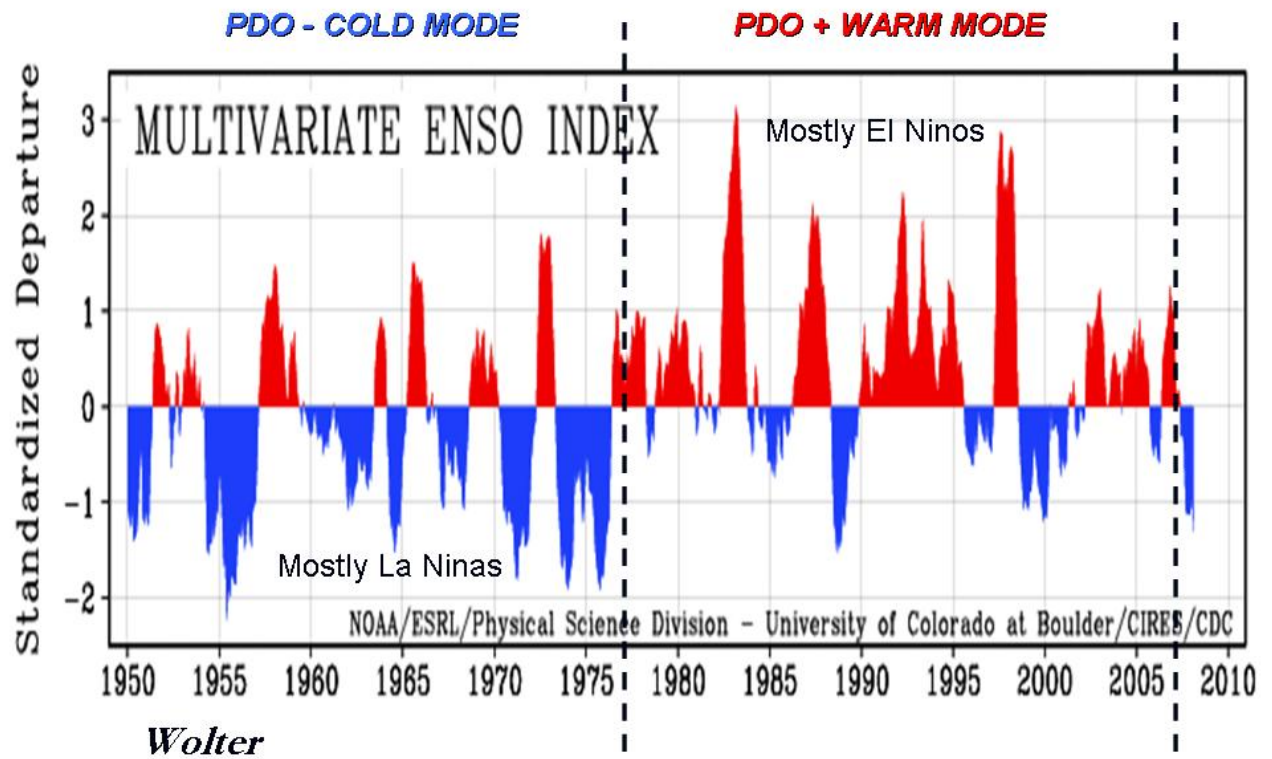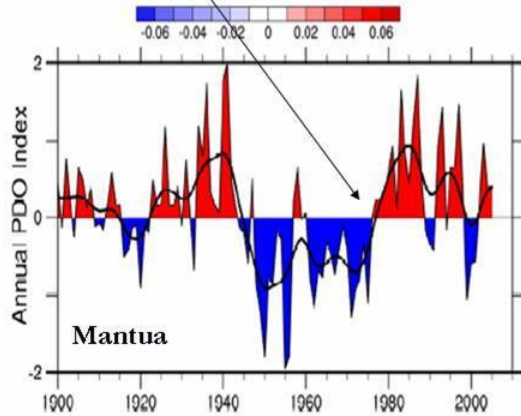
You can se the IPCC graphic below shows that in the warm mode, there is a tendency for warm water in the eastern and central Tropical Pacific, thus favoring El Nino. Reverse the colors or the cold phase and you get a tendency for more La Ninas.

SST Anomaly Positive PDO

IPCC AR4

Great Pacific
Climate Shift
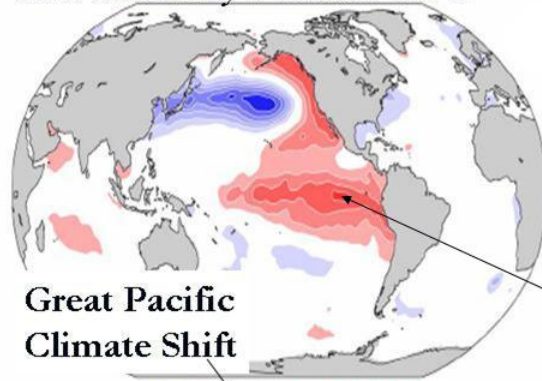
Tendency for
El Ninos in
the warm (+)
phase???

Mantua

Of course we can't be certain this PDO collapse is not just another temporary excursion into negative PDO territory but since the last three phases of the PDO were between 25 and 30 years in length and it has been 30 years since the last phase transition (from cold to warm in 1977), it would argue this time it is a true regime change especially given the strength, extent and persistence of this La Nina.