

Where are we headed during the coming century?

The record of natural climate change and the measured temperature record during the last 150 years, gives no reason for alarm about dangerous warming caused by human CO₂ emissions. Predictions based on past warming and cooling cycles over the past 500 years accurately predicted the present cooling phase (Easterbrook, 2001, 2005, 2006 a,b, 2007, 2008 a,b,c; Easterbrook and Kovanen, 2000) and the establishment of cool Pacific sea surface temperatures confirms that the present cool phase will persist for several decades.

What does the century have in store for global climates? According to the IPCC and computer modelers who believe that CO₂ is the cause of global warming, the Earth is in store for climatic catastrophe later this century. Computer models predict global warming of as much as 5-6° C (10-11° F) predicated on the assumption that global warming is caused by increasing atmospheric CO₂ and that CO₂ will continue to rise rapidly.

The ramifications of such an increase in global warming is predicted to be far reaching, even catastrophic. The Arctic Ocean could become free of its cover of sea ice, the Greenland ice sheet could diminish rapidly, and alpine glaciers could disappear. Water supply in areas that depend on snowmelt could be severely impacted. Melting of Greenland and Antarctic ice could cause sea level to rise, flooding low coast areas and submerging low coral islands in the oceans. Crops in critical agricultural areas could fail, resulting in widespread starvation of millions of people in agriculturally marginal areas. Wheat/grain belts, such as the mid-continent area of North America, would have to shift northward. Droughts could become increasingly severe in dry areas. Environmental impacts would be severe, resulting in extinction of some species and drastic population decreases in other. All of this is based on computer models with no demonstrable physical cause-and-effect data. However, as seen in the data on preceding pages and the geologic record, global climate change is caused by natural forces and the catastrophic climate changes predicted by the IPCC are untenable.

IPCC computer models have predicted the global temperatures will rise 1° per decade (Fig. 40A) for the next 10 decades and be 10° warmer by 2100. According to their models, global temperature should have warmed 1° from 2000 to 2011, but global climates have actually cooled, not warmed, since 1998 (Fig. 40B). Thus, the computer models have failed badly in predicting global climates and therefore must be considered unreliable.

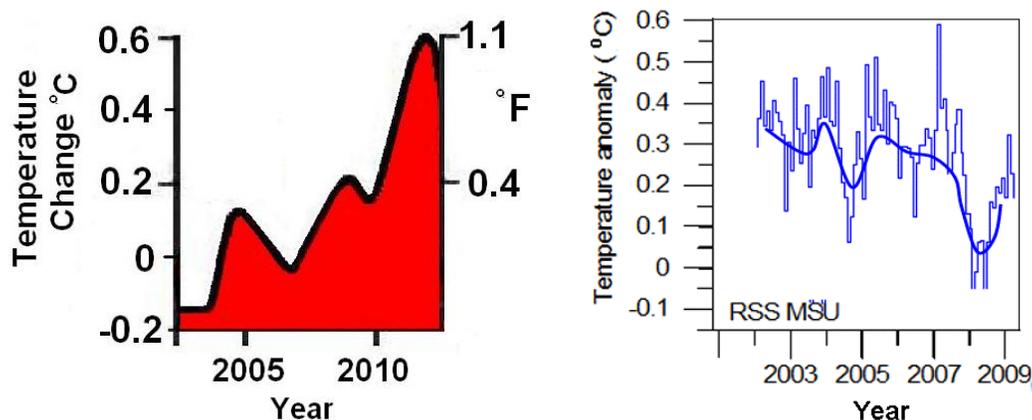


Figure 40. Comparison of IPCC global temperature prediction and actual temperature. **A.** IPCC prediction of 1°F temperature increase per decade (IPCC website, 2000). **B.** Actual temperature for the first part of the decade.

Predictions Based on Past Climate Patterns

Past warming and cooling cycles over the past 500 years were used by Easterbrook (2001, 2005, 2006 a,b, 2007, 2008 a,b,c; Easterbrook and Kovanen, 2000) to accurately predict the cooling phase that is now happening. Establishment of cool Pacific sea surface temperatures since 1999 indicates that the cool phase will persist for the next several decades.

We can look to past natural climatic cycles as a basis for predicting future climate changes. The climatic fluctuations over the past few hundred years suggest ~30 year climatic cycles of global warming and cooling, on a general warming trend from the Little Ice Age cool period. If the trend continues as it has for the past several centuries, global temperatures for the coming century might look like those in Figure 41. Global cooling began in 1999 and should last for several decades because in 1999 the Pacific Ocean switched from its warm mode to its cool and every time that has happened in the past century the climate follows (Fig. 41). The switch to the PDO cool mode to its cool mode virtually assures cooling global climate for several decades.

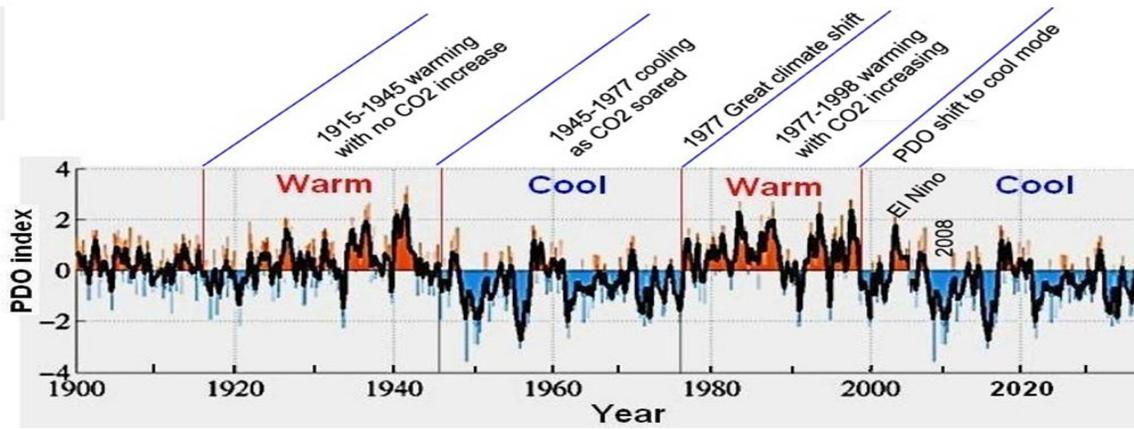


Figure 41. Pacific decadal oscillation over the past century.

The left side of [Figure 42](#) is the warming/cooling history of the past century. The right side of the graph shows that we have entered a global cooling phase that fits the historic pattern very well. Three possible projections are shown: (1) moderate cooling (similar to the 1945 to 1977 cooling); (2) deeper cooling (similar to the 1945 to 1977 cooling); or (3) severe cooling (similar to the 1790 to 1830 cooling). Only time will tell which of these will be the case, but at the moment, the sun is behaving very similar to the Dalton Minimum (sunspot cycle 4/5, which was a very cold time. This is based on the similarity of sun spot cycle 23 to cycle 4 (which immediately preceded the Dalton Minimum).

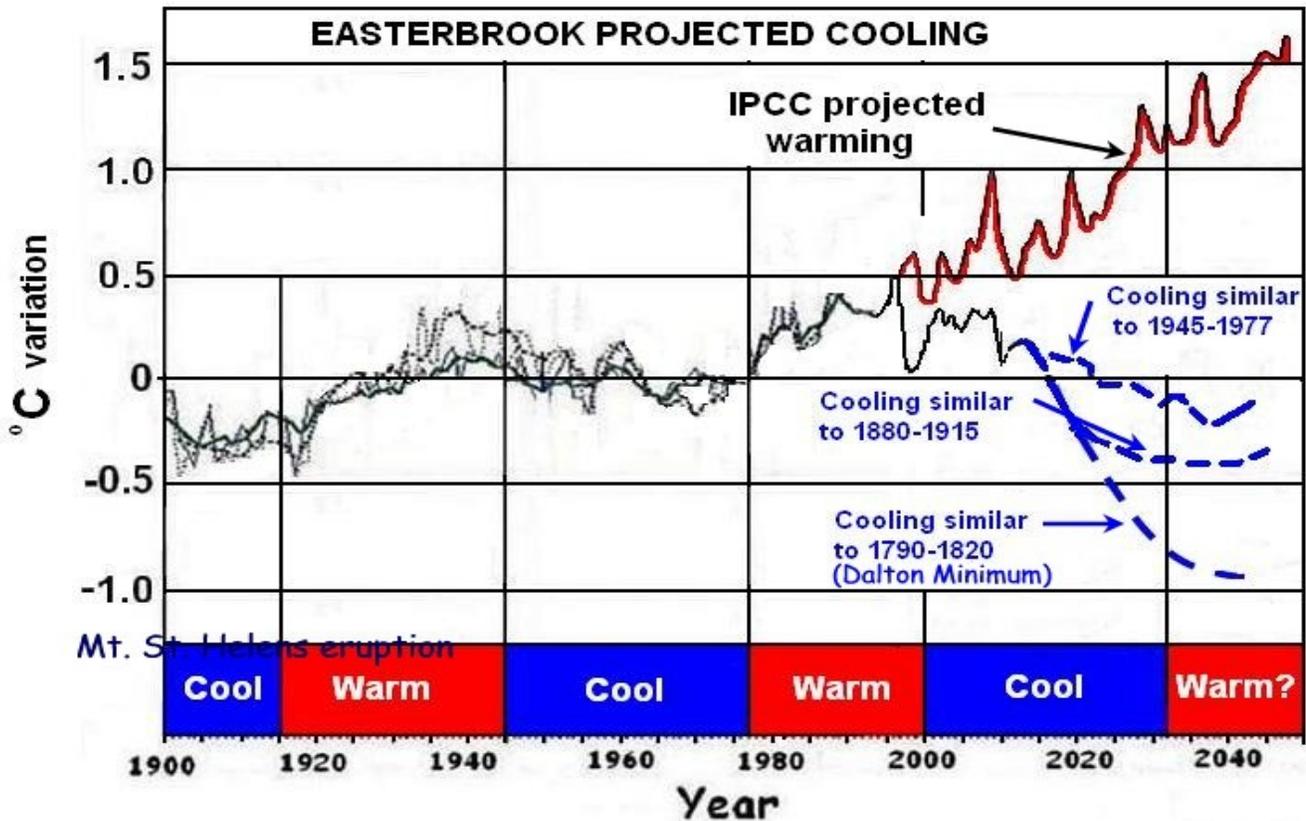


Figure 42. Projected climate for the century based on climatic patterns over the past 500 years and the switch of the PDO to its cool phase.

We live in a most interesting time. As the global climate and solar variation reveals themselves in a way not seen in the past 200 years, we will surely attain a much better understanding of what causes global warming and cooling. Time will tell. If the climate continues its deepening cooling and the sun behaves in a manner not witnessed since 1800, we can be sure that climate changes are dominated by the sun and that atmospheric CO₂ has a very small role in climate changes. If the same climatic patterns, cyclic warming and cooling, that occurred over the past 500 years continue, we can expect several decades of global cooling, followed by continued decadal cycles of global warming and cooling.