

## Afterward

Since we finished writing *The Resilient Earth* in early December, 2007, a number of events have occurred here on planet Earth. First, a number of reports have come in from around the globe proclaiming the winter of 2007-2008 to be one of the coldest on record. While one cold year does not imply a new ice age any more than a really hot year proves global warming, consider the following headlines:

- **South America Has Coldest Winter in a 90 Years**--Residents in Argentina and Brazil are wondering if this winter will ever end. Buenos Aires recorded this Thursday (November 15th) the lowest November temperature in 90 years. Temperature in the Downtown weather station reached 2.5C. Since records began more than a century ago, only two days had colder lows in November. (The Telegraph, 17 November, 2007)
- **Record snowfalls mean big meltdown**—Locations such as Madison, Wis., and Concord, N.H., endured their snowiest winter since records began, and parts of the western USA also saw a much snowier-than-average winter, according to NOAA's National Climatic Data Center. (USA Today, 9 March, 2008)
- **China Suffers Coldest Winter in 100 Years**—Millions remained stranded in China on Monday ahead of the biggest holiday of the year as parts of the country suffered their coldest winter in a century. (Reuters, 5 February, 2008)
- **Brrrr... Tajikistan Crisis!! Coldest Winter in 25 Years!** Record cold has forced 90% of the factories to close down in Tajikistan. (Reuters, 10 February, 2008)

As a consequence, despite hysterical warnings about the melting ice caps and endangered polar bears, it looks like the ice at both poles is doing just fine. Maybe too fine for those same polar bears that are supposedly endangered by melting polar ice:

- **Antarctica Ice Cap Growth Reaches Record High Levels**—The Southern Hemisphere sea ice area narrowly surpassed the previous historic maximum of 16.03 million sq. km to 16.17 million sq. km. (The Cryosphere Today, 11 October, 2007)
- **Ice between Canada and Greenland reaches highest level in 15 years** (Greenland's Sermitsiak News – 12 February, 2008)
- **Too Much Ice = Polar Bears Starving?** (Global Warming Politics – 15 February, 2008)

Second, it seems the link between a quiescent Sun and colder climate is being proven out in front of our eyes:

- **Report:** Sun's 'disturbingly quiet' cycle prompts fear of global COOLING (February 8, 2008 - Investor's Business Daily)
- **Solar data suggest our concerns should be about global cooling** – (By Geologist David Archibald of Summa Development Limited in Australia – March 2008 Scientific Paper)
- **Researchers Predict Another Ice Age** — Sunspots have all but vanished in recent years. (Daily Tech – 9 February, 2008)

Perhaps the climate experts who wish to blame all climate change on CO<sub>2</sub> need to review the works of Marsh, Svensmark and Shaviv regarding the effects of cosmic rays on low level cloud cover.

Third, some scientists are beginning to question the reliability of computer models in predicting future climate change.

- **Climate models overheat Antarctica, new study finds**--Computer analyses of global climate have consistently overstated warming in Antarctica, concludes new research by scientists at the National Center for Atmospheric Research (NCAR) and Ohio State

University...the authors caution that model projections of future Antarctic climate may be unreliable.(National Center for Atmospheric Research, 8 May, 2008)

- **In a New Climate Model, Short-Term Cooling in a Warmer World**—One of the first attempts to look ahead a decade, using computer simulations and measurements of ocean temperatures, predicts a slight cooling of Europe and North America, probably related to shifting currents and patterns in the oceans. The model is a rough replica of conditions, the scientists said. While it reliably reproduced climate patterns in Europe and North America, the model could not replicate patterns over central Africa, for example.(The New York Times, 1 May, 2008)
- **Climate prediction: No model for success**—preliminary research at the Leibniz Institute of Marine Sciences in Kiel, Germany, suggested that natural variations in sea temperatures will cancel out the decade's 0.3C global average rise predicted by the IPCC, before emissions start to warm the Earth again after 2015. IPCC authors said this was not incompatible with their models; but the German research provoked some skeptics to ask whether models could be believed at all. (BBC News, 6 May, 2008)

This model induced confusion has scientists publicly hedging their bets on the bolder predictions of the IPCC and other eco-alarmists.

Finally, world food prices have risen sharply with the blame being placed squarely on efforts to increased production of biofuels. Oil prices have climbed to \$138 per barrel yielding \$4 a gallon gas in the US. Domestic American auto manufacturers are closing plants that build SUVs and pickup trucks while hurrying to bring new plugin hybrids to market. Airlines are taking old, less efficient planes out of service in

order to save on fuel costs. Even so, the airline industry is hemorrhaging red ink, with debt increasing past \$7 billion.

Around the world, orders for nuclear power plants are swelling. Countries that had been planning to close nuclear plants are reversing their decisions or ordering new replacements. There are even signs that a few politicians are beginning to realize that the world is facing an energy crisis that is going to totally eclipse the global warming scare of the past decade. What does this all mean?

Consider again the example of the Alvarez theory that an impact by an astronomical object caused the extinction of the dinosaurs. At first this idea was viewed as radical and a contradiction of the consensus view of slow geologic and evolutionary change. Over time, the scientific community came to accept the reality of the Chicxulub impact, displacing the older dogma. Because it was an exciting story many TV shows and magazine articles describing the event were produced. But the scientific story didn't stop there.

As it turns out, other evidence shows that the impact was not the only cause of the KT extinction. It was a factor, but not the only one. Similarly, the theory that anthropogenic CO<sub>2</sub> emissions are the only driver of global warming—the simplified view presented in most every news story or special program on global warming—is proving to be incorrect. Human emissions are a factor, but not the only factor—perhaps not even the major factor in climate change. The news media, capricious at best, is showing signs of moving on to the next crisis while scientists continue to do what they always do, argue among themselves.

Perhaps sanity will win out after all. The Global Warming Crisis will fade as have all the other eco-fads, replaced by the next world threatening crisis to catch the eye of the news media and pandering politicians. Calmer heads will prevail, allowing scientists and engineers to find workable, realistic solutions to the dual problems of pollution and energy production.