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Losing Bet on Climate Change: Update

Proposing a reasonable global warming wager

[Ronald Bailey](#) | January 17, 2008

For those making predictions, it has become increasingly popular to put your money where your mouth is. For example, the [Iowa Electronic Markets](#) and [Intrade](#) allow users to participate in online futures trading involving the outcomes of political events. The [Long Now Foundation](#) sponsors the [Long Bets](#) website at which competitors bet on issues that are societally and scientifically important—e.g., by 2010 at least 50 percent of all books sold worldwide will be printed on demand at the point of sale, or that at least one human being alive in 2000 will also be alive in 2150.

So what about climate change? In April 2006, I wrote a column, "[Losing Bet on Climate Change](#)," about a notional wager proposed by University of Virginia climatologist, Cato Institute senior fellow, and catastrophic climate change skeptic Patrick Michaels. In 1998, Michaels made the following bet in his [World Climate Report](#):

If we were of a betting sort (and there are some nasty rumors going around that we are), we would be willing to wager that the 10-year period beginning in January 1998 and extending through December 2007 will show a statistically significant downward trend in the monthly satellite record of global temperatures.

Surely such a wager should sound interesting to those who think the planetary temperature will increase several tenths of a degree during that period.

Michaels acknowledged in my 2006 column that "technically we lose the bet." Why? Because no statistically significant downward trend had emerged. On the other hand, the actual upward satellite record temperature trend of +0.032 degrees Celsius was not significantly different from zero. On January 7th of this year, Michaels sent an e-mail alerting me to the fact that global temperature trend in the satellite data set put together by researchers at [Remote Sensing Systems](#) (RSS) showed a downward temperature trend. Michaels correctly noted that the RSS data set is generally preferred by "greens" because it shows a higher rate of warming than does the satellite data set put together by John Christy and his colleagues at the University of Alabama at Huntsville (UAH). According to Michaels, "The trend in the monthly anomaly data from January 1998 through December 2007 is -0.06degC/decade." Michaels' email added, "I expect you will note this prominently."

The first thing to keep in mind is that the downward trend between 1998 and 2008 in the RSS data cited by Michaels is not "statistically significant," so he would still have lost his bet. And new information suggests that there may be a spurious cooling trend in the last few months of the RSS data set. So Michaels' colleague Chip Knappenberger did calculations using the UAH data and [found](#) that the "trend in the UAH derived temperatures of the earth's lower atmosphere for the most recent 10-year period (January 1998 though December 2007) is a *positive* 0.04°C/decade (although it is not statistically significant)." Either way, both sets of satellite data show that the trend in average global temperatures for

the past decade has been [more or less flat](#).

Carl Mears from RSS argues that a decade is too short a time period for teasing out man-made trends from the climate record. What is the long term trend? Since 1978, the RSS data set finds that the lower troposphere is warming at about [+0.173 degrees](#) Celsius per decade, while the UAH data set trend is [+0.142 degrees](#) Celsius per decade.

Another problem with making bets on temperature trends is that the data sets are constantly being revised. Knappenberger notes that both the RSS data and UAH data have been [revised](#), as have the surface temperature data sets compiled by [Goddard Institute for Space Studies](#) (GISS) in New York and the [Hadley Centre](#) in Britain. Knappenberger adds that even with revisions the surface temperature data sets nevertheless show a warming trend of +0.16 to +0.18 degrees Celsius per decade. In 1998, the world experienced a [huge El Nino](#) event in which the tropical Pacific Ocean heated up the planet. The tropical Pacific has now [switched to a La Nina](#) which will reverse the El Nino and cool the planet. If the La Nina had occurred earlier in 2007 and there are no errors in the RSS data, there might have been enough cooling such that Michaels would have won his bet. But that didn't happen.

So what about future climate change bets? Bets force intellectual clarity and can capture the public's imagination. Over at Long Bets, there are a number of [climate related predictions](#) on offer though no actual bets have been placed. One proposed bet is that by 2100 global average temperatures measured by satellites will be less than +1.94 degrees Celsius higher than the average temperature in 1990. Another predicts that temperatures will increase by at least +0.15 degrees Celsius from 2005 to 2025. This last one is wimpy considering that even the lowest trend is the UAH's at +0.142 degrees Celsius per decade. At the Bali Climate Change Conference, the Hadley Centre [boldly predicted](#) that by 2014 "the global average temperature is expected to have risen by around 0.3 degrees Celsius compared to 2004, and half of the years after 2009 are predicted to be hotter than the current record hot year, 1998."

The Hadley Centre prediction sounds like a pretty reasonable bet to me. Now will any climate change skeptics and militants step up and make it?

Disclosure: I am an adjunct scholar at the Cato Institute.

Ronald Bailey is **reason's** science correspondent. His most recent book, [Liberation Biology: The Scientific and Moral Case for the Biotech Revolution](#), is available from Prometheus Books.

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