WHAT YOU SHOULD KNOW ABOUT WEATHER MODELS

All of the predictions that the temperature of the globe is going to warm are based on scientific climate models. A recent article in Science magazine compared actual temperature to the result of the model[1]. Figure 1 is copied from that report. The impression one gets from this graph is that temperature change from 1960 to 2010 follows the model quite well. There is a general trend upwards.

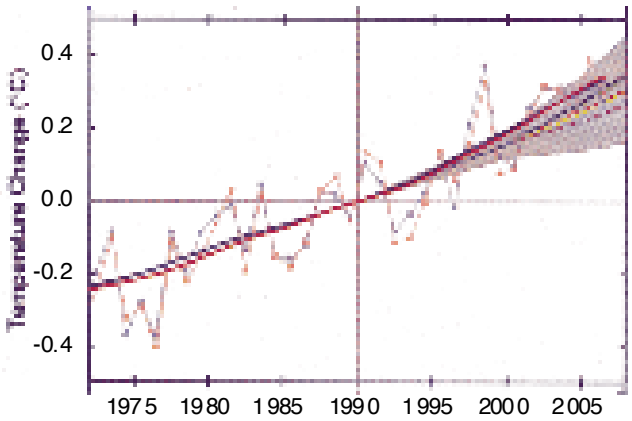

Figure 1 Global Temperature Models

However, notice the jagged line, which is the actual global temperature is plotted to the nearest 1/10 of a degree C or about 0.18 ° F. This assumes we know what global temperature is, how and where it is measured? How accurate is it measured? Can we measure the temperature of the entire world accurate to 1/10 of a degree? As Eliza Doolittle once said, "not bloody likely." Notice the appropriately colored grey area, which begins around 1990, and the lines appear to fan out after 1990. By 2010, the grey area is about 0.3 °C of a degree in width. The total change predicted by these models over 50 years is about 0.5 °C. The grey area, or error band is about 60% of the predicted change.

How is this model constructed? The scientists study the various factors that they think are related to weather predictions and arrange these factors in a mathematical model. They enter current conditions into this model and if predicts the conditions in the future. According to an article in the May 4, 2007 Oregonian page A5, the models for the global temperature predict as much as a 11 ° C rise in global temperature by 2100. They did not report any that showed negative temperature change. These models are the basis for changes in human behavior demanded by the environmentalist.

Central to the issue as to whether the human species should submit to these demands is the accuracy of these predictions. Of course, we could wait 100 years and then we would know. On the other hand, we can determine the accuracy of these predictive models by looking at some very sophisticated climate models that are used every day to predict the temperature from 1 to 7 days in advance at a specific point and with considerable less accuracy. A much easier task than predict the temperature of the entire globe within a 1/10 of a degree, 100 years from now.

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[1] Rahmstorf, Stefan et. al., Recent climate Observations Compared to Projections, Science, May 4 2007, page 709

North Pacific Research gathered the weather data published from April 12th through May 18th, by the Oregonian Newspaper, and compared those predictions from one to seven days in advance to the actual temperature record in Portland for that day. The error of each of these predictions was then calculated and plotted in Figure 2.

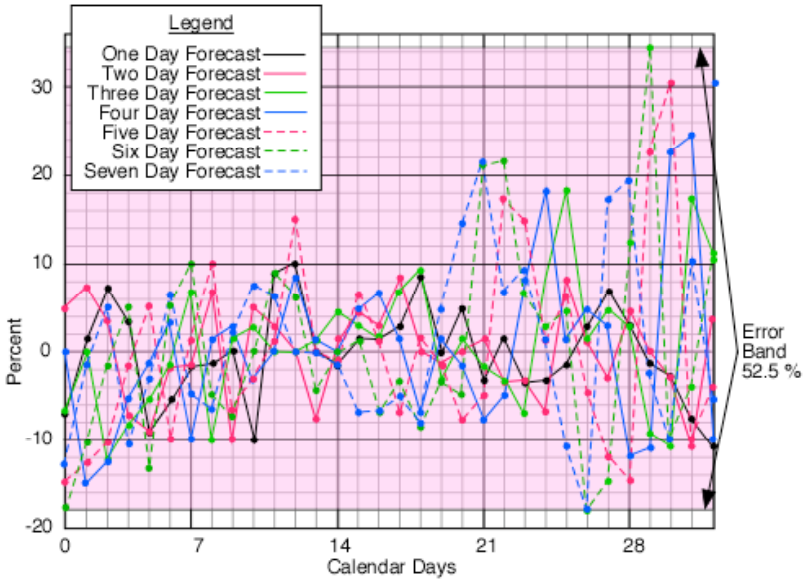

Figure 2. Accuracy of One to Seven Day Weather Prediction Errors

Notice that the large scatter in the data and that the error in prediction was as much as 34.4 % higher than predicted temperature and 18.1 % lower than predicted. That represents an error band of 52.5%, and a temperature variance of 33 °F. Notice also that the prediction data is skewed to hotter Temperature, the maximum error on the hot side is almost double of the error on the cold side. If these sophisticated daily models can be off 33 °F in seven days what is the probably that the global temperature models can predict the temperature to with in 10 degrees C (18 ° F) one hundred years from now? The maximum individual daily forecast errors and temperature variance are listed in table 1.

Table 1: One to Seven day Maximum Temperature Error

Forecast Period	Error Band	Temperature Variance
1 day	20.6%	13° F
2 Day	18.9%	12 °F
3 Day	30.3%	19 °F
4 Day	39.6%	26 °F
5 Day	45.3%	30 °F
6 Day	52.5%	33 °F
7 Day	40.0%	27 °F

The models predicted the wrong temperature 90.9% of the time and the models were right only 22 out of 223 predictions. Should we be bet everything on a prediction, which has a 10 to 1 chance of being correct? Notice that predictions get less accurate with time. The largest difference in temperature, 33 °F, (18 ° C) was predicted by the 6 day forecast. The maximum predicted by the 100-year model used by climatologist supporting global

warming was 11 ° C. This implies that it is as easier to predict the global temperature 100 years from now than it is to predict the temperature at a single point 6 days later. The probability of that being true is very near zero. Yet, this is the basis for the media blitz to modify human behavior. Modifying human behavior is not bad, but doing so by using smoke and mirrors under the name of science is reprehensible.

Based on the performance of these models studied for this paper the probability that the temperature will rise one hundred years from now is as great as the probability that it will fall. The probability that these scientists will admit that their model is in error 50 years from now is near 0 percent.

Does this mean the temperature will not rise in 100 years? No! It means we do not have the science to support a temperature rise 100 years from now. The prediction is a guess based on available data and extracting the data beyond its limits of usefulness. Shouldn't scientists know that this practice is wrong? Yes and some do.

A recent article in Science magazine states, "*That the large variability in* (carbon) *transfer efficiency is poorly represented in biogeochemical models. If applied globally, this is equivalent to a difference in carbon sequestration of more than 3 petagrams of carbon per year.*[2]" Three plus petagrams of carbon per year is about half of the world production. This paper indicates a serious problem with the global climate models. If half of the carbons is being removed from the atmosphere then the carbon dioxide in the atmosphere and the temperature rise caused by the carbon will be effected, altering the conclusions of the model and possibly the solution to the global temperature problem.

This seems to be dishonest. Why is this occurring? There could be several reasons for this behavior. But that deals with the philosophical changes in science over the last 60 years and must be the subject of another paper.

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[2] Brusseler et al, Revisiting carbon flux through the ocean's twilight zone, Science, 27 April 2007, pg 567