Written by **James Murphy** on January 19, 2018

Dueling Climate Change Studies and the Doubt That Surrounds Both of Them

A new study published in the journal *Nature* decreases the variability range of temperature increase predicted by climatologists. The new study predicts only a 2.7 C increase in global average temperature by the year 2100. If correct, the study vastly downgrades the "worst case scenarios" peddled by climate alarmists.

The study, which was done by Dr. Peter Cox and Dr. Mark Williamson from the University of Exeter, recalculates how greenhouse gases such as CO2 heat up the planet, using year to year fluctuations in global temperature rather than the historical temperature record. "These scientists have produced a more accurate estimate of how the planet will respond to increasing CO2 levels," said Piers Forster, director of the Priestly International Centre for Climate at the University of Leeds.

For 25 years, the International Panel on Climate Change (IPCC) has used the same figures to measure the equilibrium climate sensitivity (ECS). The ECS has always been considered to be 1.5 C – 4.5 C. The new study estimates a far narrower range of 2.2 C – 3.4 C, with the best estimate being 2.8 C.

The study can be read here.

"Our study all but rules out very low and very high climate sensitivities," according to Cox, the lead author of the study. He further explained, "You can think of global warming as the stretching of a spring as we hang weights from it, and climate sensitivity as related to the strength of the spring. To relate the observed global warming to climate sensitivity you need to know the amount of weight being added to the spring…. Unfortunately, we know neither of these things very well."

While precluding the worst of the doomsday scenarios, the study stops well short of claiming that anthropogenic (man-made) global warming is not a significant problem. "We will still see significant warming and impacts this century if we don't increase our ambition to reduce CO2 emissions," Forster said.

Another study, also published by *Nature* in December of 2017 came up with stunningly different results. Dr. Patrick Brown and Dr. Ken Caldiera of the Carnegie Institution for Science at Stanford University concluded that there is a 93 percent probability that the Earth will warm by 4 degrees Celsius by 2100.

That study can be read here.

"Our results suggest that it doesn't make sense to dismiss the most-severe global warming projections

based on the fact that climate models are imperfect in their simulation of the current climate," Brown said. "On the contrary, if anything, we are showing that model shortcomings can be used to dismiss the least-severe projections."

Ironically, both studies claim to reduce the ECS variability. The Carnegie Institution study simply comes up with a higher ECS of 3.2 C to 5.9 C with their best estimate being 4.6 C.

So, two highly educated and respected groups release studies within one month of each other, with one study contradicting the other. Whom do we believe?

Probably neither of them.

As Brown himself explains, "There are dozens of prominent global climate models and they all project different amounts of global warming for a given change in greenhouse gas concentrations, primarily because there is not a consensus on how to model some key aspects of the climate system."

Both of these studies lean heavily on those "dozens of prominent global climate models," which are said to predict climate over time. Obviously, the predictions these models make can vary greatly, depending upon who is inputting the information.

And these climate models have other flaws as well.

The models cannot accurately predict the Sun's energy over long periods of time. The Sun, of course, provides the vast majority of the Earth's warmth. The best estimates say that anthropogenic global warming accounts for .001 percent of warming in relation to the warmth the Sun produces. If the predictions for the energy of the Sun are off by .001 percent, the climate model becomes meaningless.

The models also cannot accurately predict the effect of clouds on the climate. Clouds are hard to predict because they are amorphous, residing at different altitudes; they aren't solid and they come in many different forms. And scientists do not fully understand how they form.

So, while the University of Exeter study is potentially good news, in that the calamities predicted to be caused by climate change might not be as severe, there's always another study — another set of scientists — ready to contradict them.

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