



Despite Hurricanes Harvey and Irma, science has no idea if climate change is causing more (or fewer) powerful hurricanes

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After Hurricane Harvey hit Texas, it didn't take long for climate alarmists to claim they knew all along it would happen. Politico's Eric Holthaus declared "We knew this would happen, decades ago." Naomi Klein stated "these events have long been predicted by climate scientists." Joe Romm at ThinkProgress wrote, "the fact is that Harvey is exactly the kind of off-the-charts hurricane we can expect to see more often because of climate change."

According to these and other authors, rising greenhouse gas levels are at least partly to blame for the occurrence and severity of Harvey, and probably for Hurricane Irma as well. But after-the-fact guesswork is not science. If any would-be expert really knew long ago that Harvey was on its way, let him or her prove it by predicting what next year's hurricane season will bring.

Don't hold your breath: Even the best meteorologists in the world weren't able to predict the development and track of Hurricane Harvey until a few days before it hit.

This is why the idea of climate science being "settled" is so ludicrous, at least as regards the connection between global warming and tropical cyclones. A settled theory makes specific predictions that can, in principle, be tested against observed data. A theory that only yields vague, untestable predictions is, at best, a work in progress.

The climate alarmists offer a vague prediction: Hurricanes may or may not happen in any particular year, but when they do, they will be more intense than they would have been if GHG levels were lower. This is a convenient prediction to make because we can never test it. It requires observing the behaviour of imaginary storms in an unobservable world. Good luck collecting the data.

Climate scientists instead use computer models to simulate the alternative world. But the models project hundreds of possible worlds, and predict every conceivable outcome, so whatever happens it is consistent with at least one model run. After Hurricane Katrina hit New Orleans in 2005, some climate modelers predicted such storms would be more frequent in a warmer world, while others predicted the opposite, and still others said there was no connection between warming and hurricanes.

What ensued was an historically unprecedented 12-year absence of major (category 3 or higher) hurricanes making landfall in the United States, until Harvey, which ties for 14th-most

intense hurricane since 1851. The events after 2005 were "consistent with" some projections, but any other events would have been as well.

The long absence of landfalling hurricanes also points to another problem when opinion writers connect GHGs to extreme weather. Science needs to be concerned not only with conspicuous things that happened, but with things that conspicuously didn't happen. Like the famous dog in the Sherlock Holmes story, the bark that doesn't happen can be the most important of all.

It is natural to consider a hurricane a disruptive event that demands an explanation. It is much more difficult to imagine nice weather as a disruption to bad weather that somehow never happened.

Suppose a hurricane would have hit Florida in August 2009, but GHG emissions prevented it and the weather was mild instead. The "event," pleasant weather, came and went unnoticed and nobody felt the need to explain why it happened. It is a mistake to think that only bad events call for an explanation, and only to raise the warming conjecture when bad weather happens. If we are going to tie weather events to GHGs, we have to be consistent about it. We should not assume that any time we have pleasant weather, we were going to have it anyway, but a storm is unusual and proves GHG's control the climate.

I am grateful to the scientists who work at understanding hurricane and typhoon events, and whose ability to forecast them days in advance has saved countless lives. But when opinion writers tacitly assume all good weather is natural and GHGs only cause bad weather, or claim to be able to predict future storms, but only after they have already occurred, I reserve the right to call their science unsettled.

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