



## Climate Change Hype Doesn't Help

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As soon as Hurricanes Harvey and Irma made landfall in the U.S., scientists, politicians and journalists began to discuss the role of climate change in natural disasters. Although a clear scientific consensus has emerged over the past decade that climate change influences hurricanes in the long run, its effect upon any individual storm is unclear. Anyone trying to score political points after a natural disaster should take a deep breath and review the science first.

As a meteorologist with access to the best weather-forecast model data available, I watched each hurricane's landfall with particular interest. Harvey and Irma broke the record 12-year major hurricane landfall drought on the U.S. coastline. Since Wilma in October 2005, 31 major hurricanes had swirled in the North Atlantic but all failed to reach the U.S. with a Category 3 or higher intensity.

Even as we worked to divine exactly where the hurricanes would land, a media narrative began to form linking the devastating storms to climate change. Some found it ironic that states represented by "climate deniers" were being pummeled by hurricanes. Alarmists reveled in the irony that Houston, home to petrochemical plants, was flooded by Harvey, while others gleefully reported that President Trump's Mar-a-Lago might be inundated by Irma.

How to put these two hurricanes into proper context? An informative [website](#) from the Geophysical Fluid Dynamics Laboratory, part of the National Oceanic and Atmospheric Administration, synthesizes reams of research literature on the links between hurricanes and global warming. Over the next century, climate models generally indicate fewer but stronger storms—between 2% and 11% greater average storm intensity—with substantially increased rain rates. Against the background of slow sea-level rise, explosive coastal population growth will overwhelmingly exacerbate any hurricane's damages. In the aggregate, the global-warming signal may just now be emerging out of our noisy observational records, and we may not know certainly for several decades. These conclusions are hardly controversial in the climate-science community.

My own [research](#), cited in a recent Intergovernmental Panel on Climate Change [report](#), found that during the past half-century tropical storms and hurricanes have not shown an upward trend in frequency or accumulated energy. Instead they remain naturally variable from year-to-year. The global prevalence of the most intense storms (Category 4 and 5) has not shown a significant

upward trend either. Historical observations of extreme cyclones in the 1980s, especially in the Southern Hemisphere, are in sore need of reanalysis.

By focusing on whether climate change caused a hurricane, journalists fail to appreciate the complexity of extreme weather events. While most details are still hazy with the best climate modeling tools, the bigger issue than global warming is that more people are choosing to live in coastal areas, where hurricanes certainly will be most destructive.

The nascent field of “attribution science” attempts to explain how climate change may affect characteristics of a given hurricane using models in “what if” mode. Such research requires a faithful reproduction of events and predictions of the future constrained by subjective choices within computer models. This research also takes time—which means other scientists must examine the evidence with patience and judiciousness not usually seen on Twitter or cable news. Still, the scientific community already knows plenty about hurricanes and climate change—knowledge it has accumulated over two decades through peer-reviewed research, academic conferences and voluminous national and international assessments. Yet climate scientists all too often speculate during interviews rather than refer to IPCC reports or their cousins from the U.S. National Climate Assessment. Some climate scientists have peddled tenuous theories with no contemporaneous research evidence. Advocacy groups package these talking points for easy consumption by journalists, who eagerly repeat them.

The historical record books contain dozens of devastating hurricane landfalls over the past century, any of which, if repeated, would be catastrophic regardless of additional climate-change effects. To prepare for the next hurricane, the U.S. needs the best weather forecasts, evacuation plans and leadership. These plans should be built on sound science, not speculation, overselling or exaggeration. Hurricane science in this political climate already has enough spin.

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