

## Is Hurricane Season Being Impacted by Global Warming?

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As any news channel will tell you, hurricane season is hitting the Atlantic coast in full force right now. In the aftermath of Hurricane Helene, states are now braving Hurricane Milton only about 20 days later. Storm after storm seems to bombard parts of the U.S. with some of the worst tropical storm weather we have ever seen. As residents of Wisconsin who have been resigned to mere spectators of the tragic events, all there is left to do is wonder how these situations seem to just keep getting worse. The answer is quite likely global warming.

From June 1 through Nov. 30, which is considered hurricane season, there is a heightened likelihood of all four main conditions which form these tropical storms occurring. According to NASA, a hurricane is created from a combination of warm ocean waters, high air moisture, low vertical wind shear and a pre-existing disturbance such as a thunderstorm. These hurricane 'ingredients' are seen to be further exacerbated by global warming.

Additionally, scientists have begun to note how global warming has strengthened the power and worsened the effects of these storms. Senior Scientist at NOAA's Geophysical Fluid Dynamics Laboratory, Tom Knutson, states that rising sea levels have impacted flood levels in storm surge events and that there has been a noticeable increase in extreme rainfall events. As the surface temperature of Earth rises, more water evaporates from the land and oceans, which adds more moisture to the air. On top of this, warmer air temperatures are capable of holding higher levels of water vapor. Combined, this leads to more intense rainfall during extreme weather events. Knutson also states that there has been a slight increase in hurricane wind intensity. This is believed to be caused by warmer ocean temperatures as well as more moisture in the air, which both fuel the strength of hurricanes.

Generally, we have seen more storms, stronger hurricanes and an increase in hurricanes that intensify quickly. So far, most of these increases are from natural climate variations. However, According to NASA in 2022, a study suggests that the latest increase in the amount of North Atlantic hurricanes experiencing rapid intensification is slightly too drastic to be explained

by natural variability alone. This is most likely the beginning of climate change's impact on hurricane weather.

Source: NASA