Climate change boosted Milton’s landfall strength from Category 2 to 3

Using this simulated data set, called IRIS, the researchers selected for those storms that made landfall along a track similar to that of Milton. Using these, they show that the warming climate has boosted the frequency of storms of Milton’s intensity by 40 percent. Correspondingly, the maximum wind speeds of similar storms have been boosted by about 10 percent. In Milton’s case, that means that, in the absence of climate change, it was likely to have made landfall as a Category 2 storm, rather than the Category 3 it actually was.

Rainfall

The lack of full meteorological data caused a problem when it came to analyzing Milton’s rainfall. The researchers ended up having to analyze rainfall more generally. They took four data sets that do track rainfall across these regions and tracked the link between extreme rainfall and the warming climate to estimate how much more often extreme events occur in a world that is now 1.3° C warmer than it was in pre-industrial times.

They focus on instances of extreme one-day rainfall within the June to November period, looking specifically at 1-in-10-year and 1-in-100-year events. Both of these produced similar results, suggesting that heavy one-day rainfalls are about twice as likely in today’s climates, and the most extreme of these are between 20 and 30 percent more intense.

These results came from three of the four data sets used,

which produced largely similar results. The fourth dataset they used suggested a far stronger effect of climate change, but since it wasn’t consistent with the rest, these results weren’t used.

As with the Helene analysis, it’s worth noting that this work represents a specific snapshot in time along a long-term warming trajectory. In other words, it’s looking at the impact of 1.3° C of warming at a time when our emissions are nearly at the point where they commit us to at least 1.5° C of warming. And that will tilt the scales further in favor of extreme weather events like this.

https://arstechnica.com/science/2024/10/climate-change-boosted-miltons-landfall-strength-from-category-2-to-3/