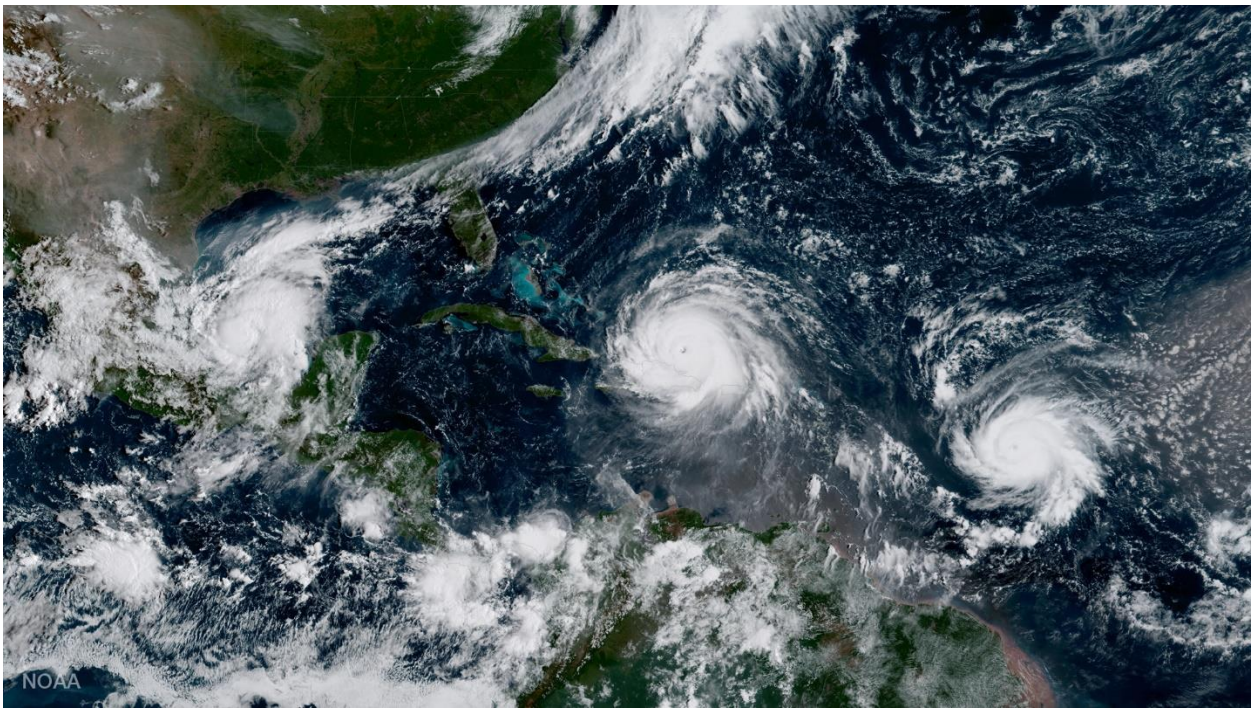
Climate at a Glance: Hurricanes



This geocolor image from the GOES-16 satellite shows Hurricane Katia (L) Hurricane Irma (M) and Hurricane Jose (R) in the Atlantic Ocean on September 7, 2017. Image: NOAA

Key Takeaways:

- There has been **no increase in hurricanes** as the planet has modestly warmed. In fact, data show hurricanes are trending slightly downward since 1971.
- Even the **U.N. IPCC agrees**, finding no increase in the frequency or severity of hurricanes.
- Recently, the **United States** went through its **longest period in recorded history without a major hurricane** strike, also experiencing its **fewest total hurricanes in any eight-year period**.
- **Florida**, America's most hurricane-prone state, **recently** underwent its **longest period in recorded history without any hurricanes**.

Short Summary:

Devastating hurricanes occurred long before the invention of automobiles and coal-fired power plants, and real-world hurricane activity shows little, if any, impact from global warming.

The Intergovernmental Panel on Climate Change (IPCC) confirms this fact, stating in its 2018 interim report, there is "only low confidence for the attribution of any detectable changes in tropical cyclone activity to anthropogenic influences."[1] Similarly, in the IPCC's AR6 WG1 report, released in August 2021, the IPCC noted, "[i]dentifying past trends in TC [tropical storm] metrics remains a

challenge," a statement that essentially admits scientists have yet to identify a solid measurable upward trend in the data.[2]

Objective hurricane and tropical storm data confirm the IPCC's conclusions.[3] In Figure 1 below, note that the blue line for hurricanes, is trending slightly downward while major hurricanes in green show no trend.

A 2022 peer reviewed paper published in *Nature Climate Change* titled, "Declining tropical cyclone frequency under global warming," confirms the recent hurricane decline.[4]

Figure 1: Global hurricane frequency since 1971

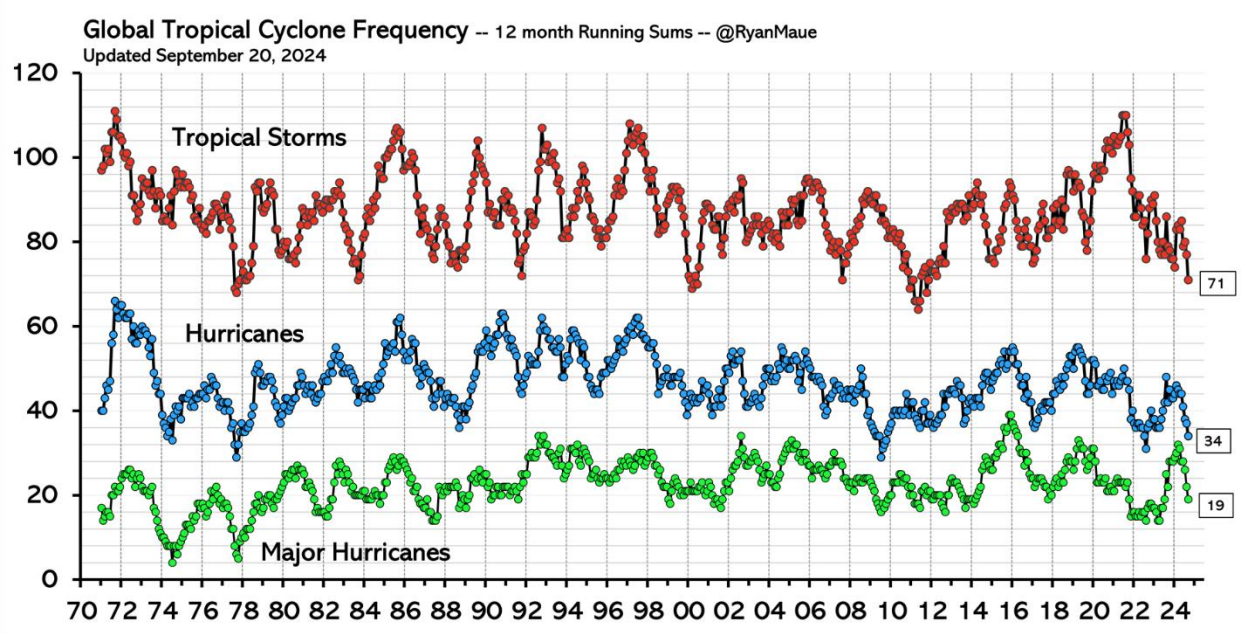


Figure 1. This figure shows that global hurricane and tropical cyclone activity is not increasing. Even with the slight uptick in the number of tropical storms in 2021, it is still below the peak recorded in 1971. Source: Ryan N. Maue, "Global Tropical Cyclone Activity," Climate Atlas, accessed February 25, 2025.

The impacts hurricanes have had in America have recently been at an all-time low. The United States recently went more than a decade (2005 through 2017) without a major hurricane—a hurricane measuring Category 3 or higher—making landfall. That is the longest such period in recorded history.[5]

The United States also recently experienced the fewest number of hurricane strikes in any eight year period in recorded history, from 2009 through 2017.[6] Additionally, America's most vulnerable state for hurricanes, Florida, concluded an 11-year period without a landfalling hurricane of any size in 2016, the longest such period in recorded history.[7] The Gulf of Mexico also recently benefited from its longest hurricane-free period in recorded history (2013–16).

References:

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