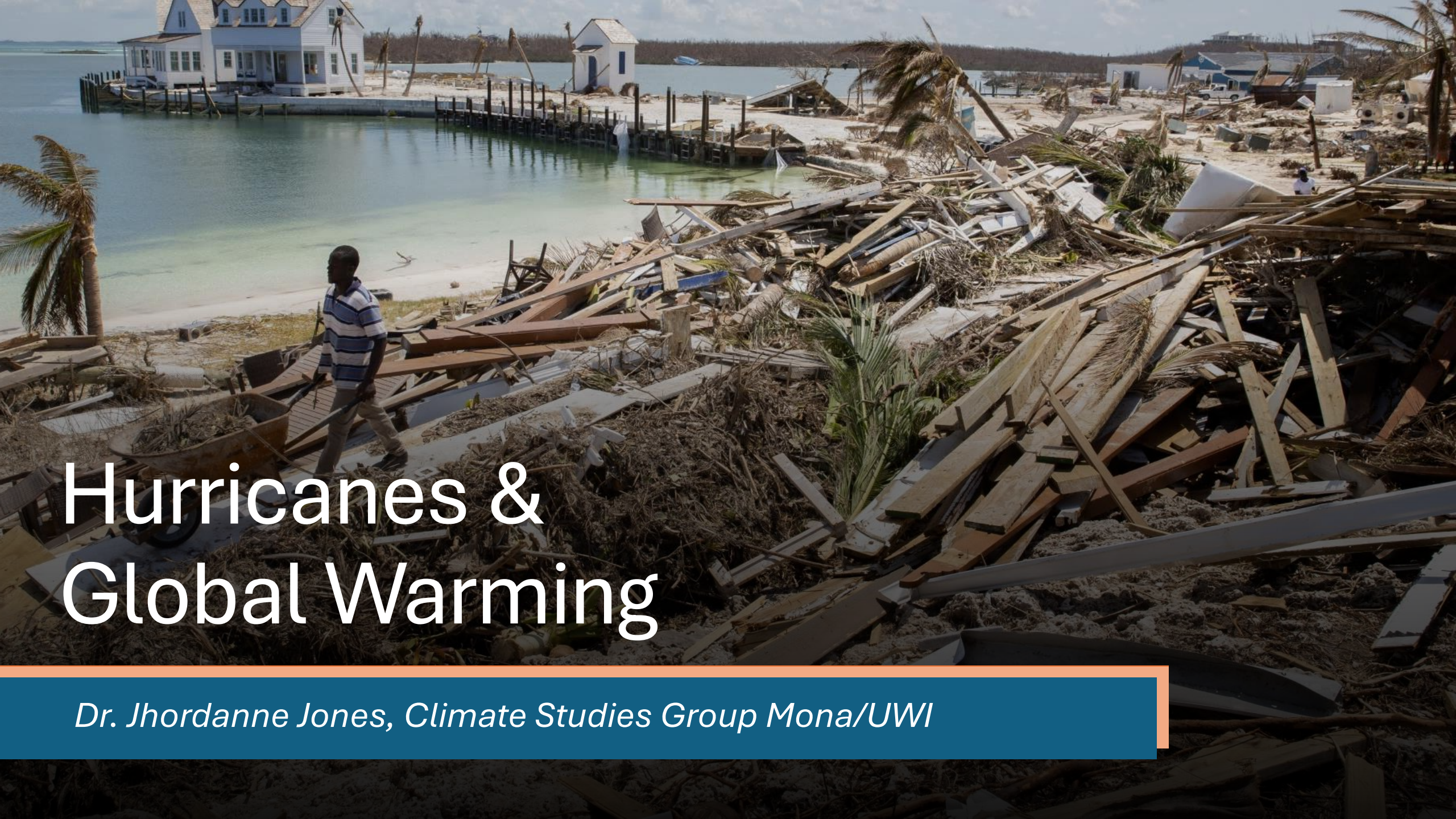
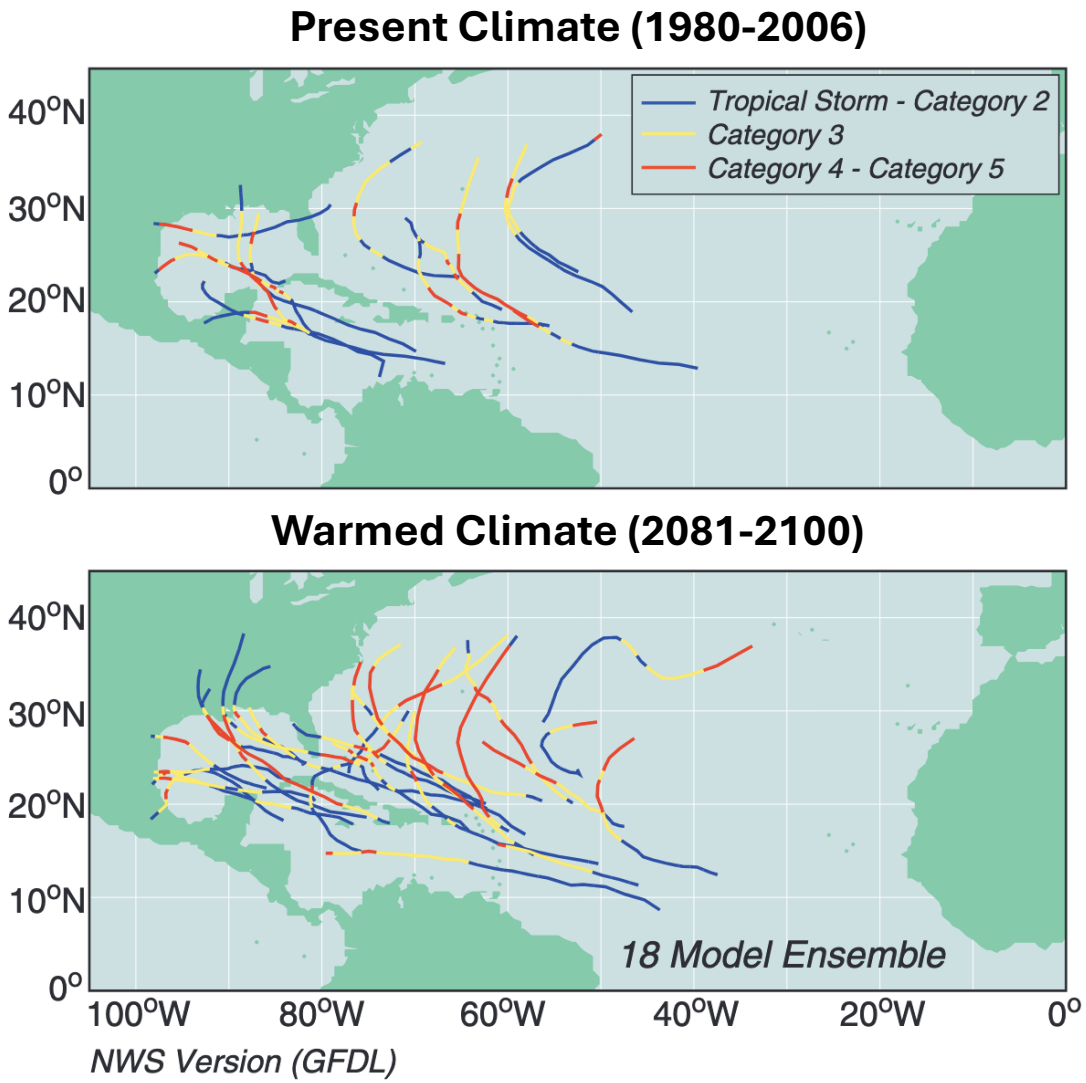


Hurricanes & Global Warming

Dr. Jhordanne Jones, Climate Studies Group Mona/UWI

Global warming and hurricanes

There is **high confidence** that the frequency of the most intense storms will increase with warming.



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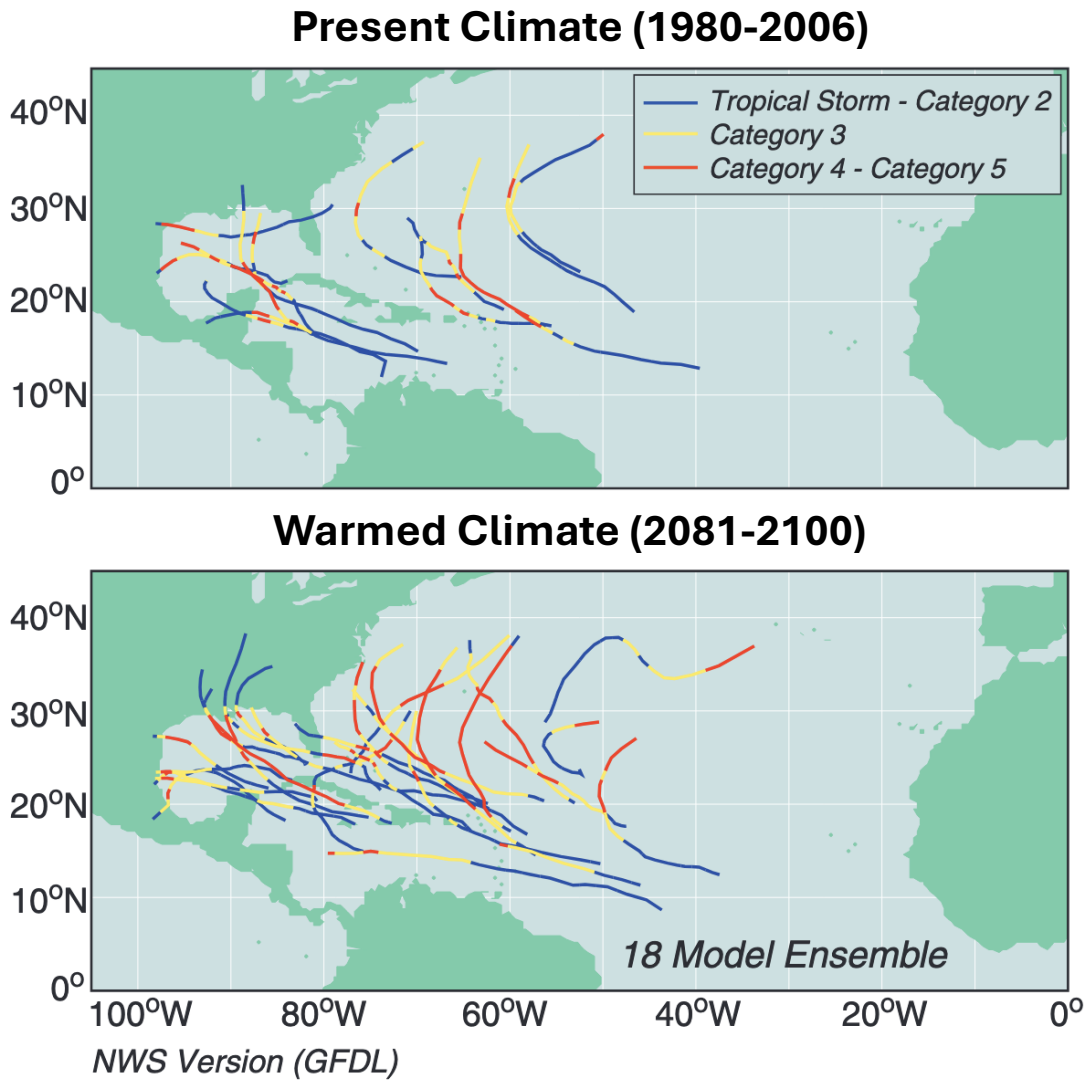
These projections include increases in both wind and rainfall intensity.



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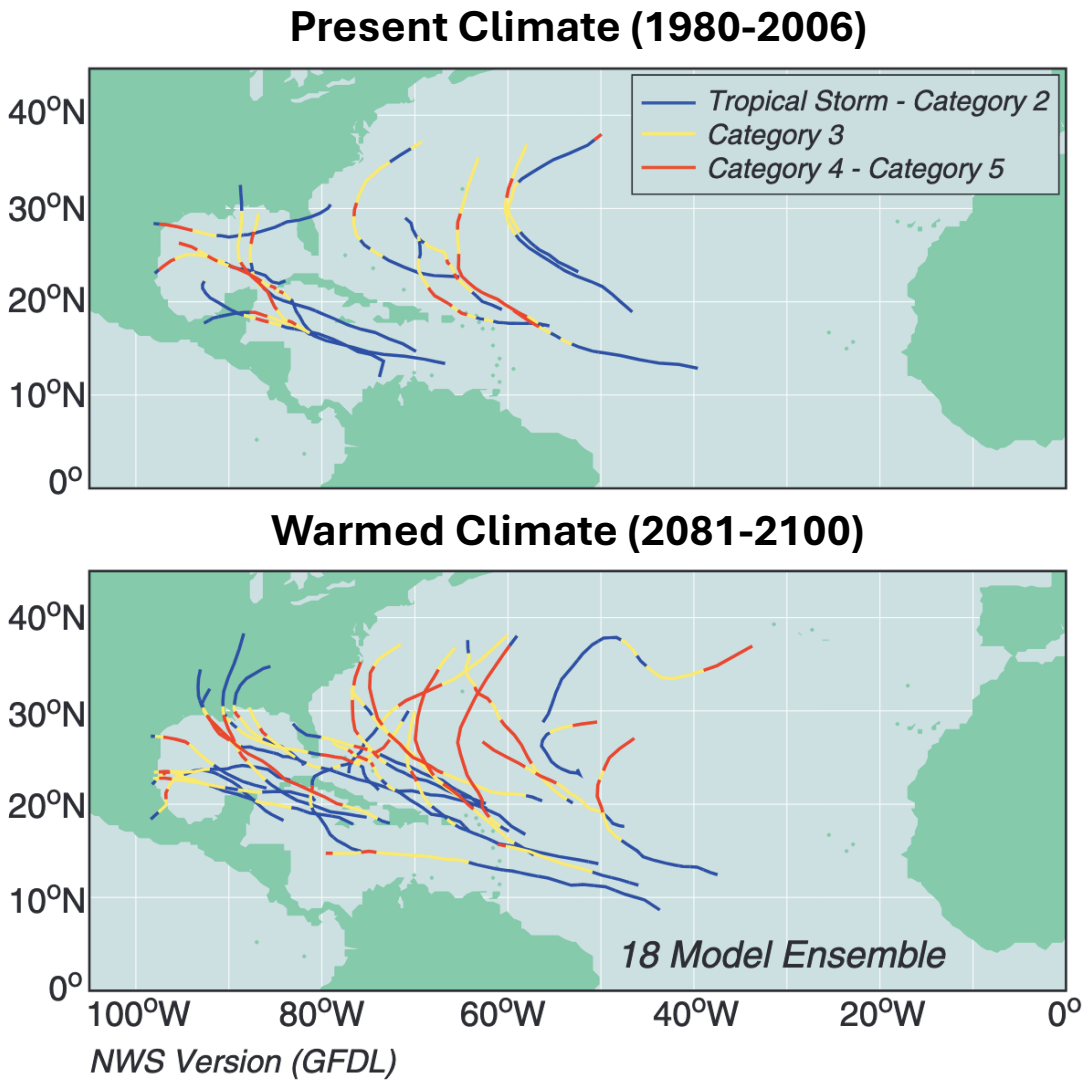
There is **low confidence** in projected changes to storm size, structure, landfall probability, and genesis location.



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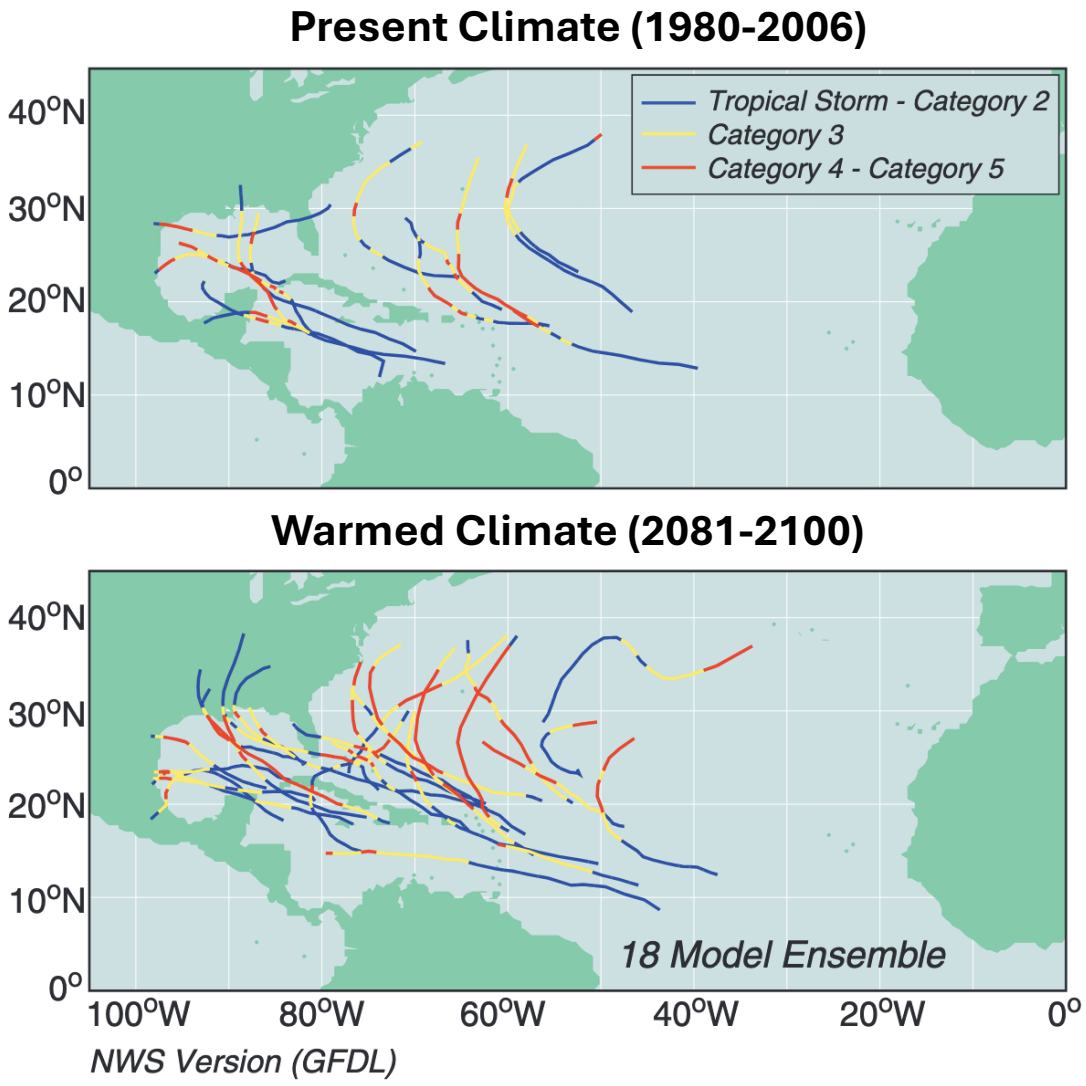
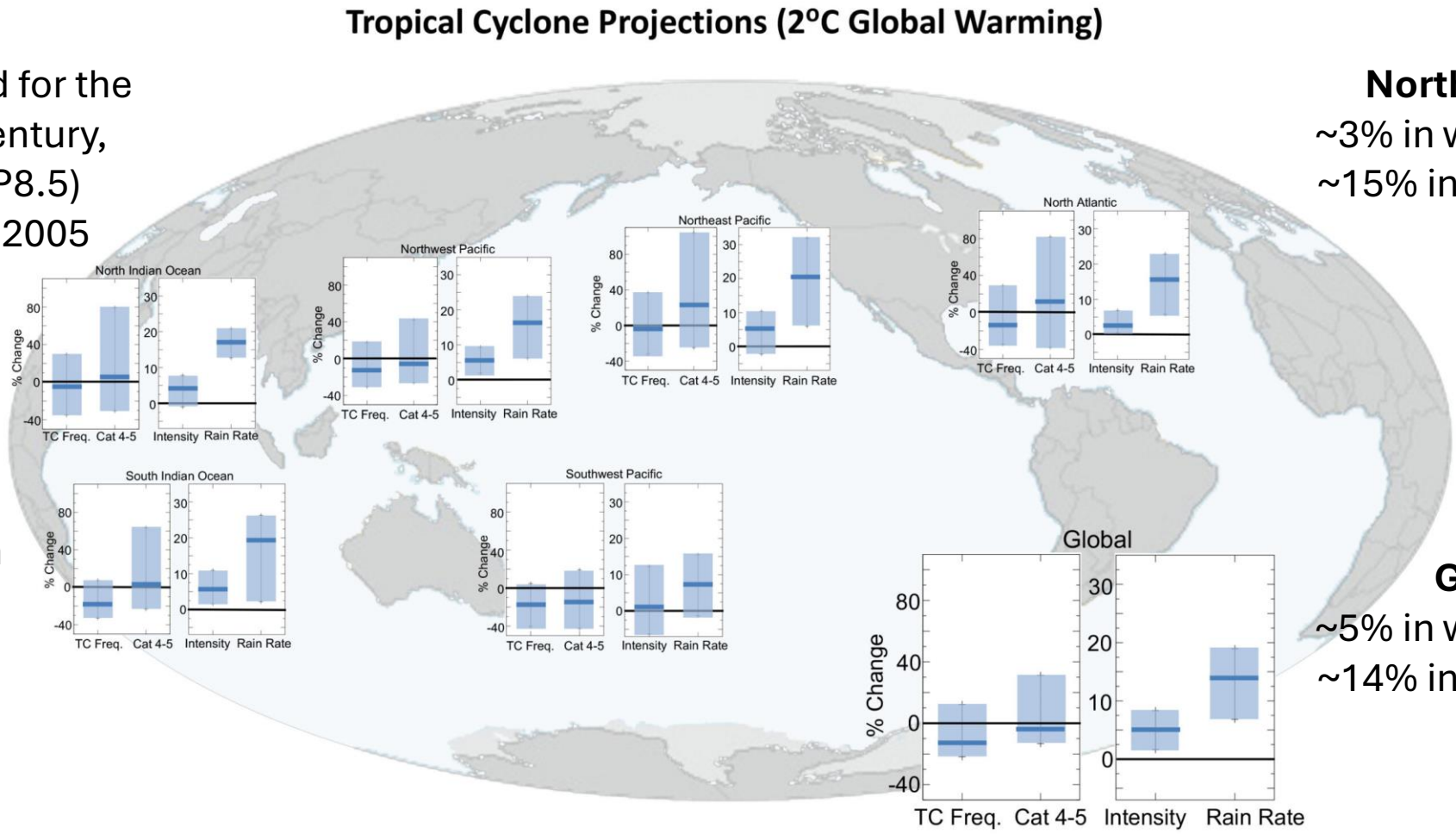


Stronger, rainier storms with warming

Changes projected for the mid- to end-of-century, 2055-2100 (RCP8.5) relative to 1986-2005

Global increase in the intensity and rainfall rates of storms



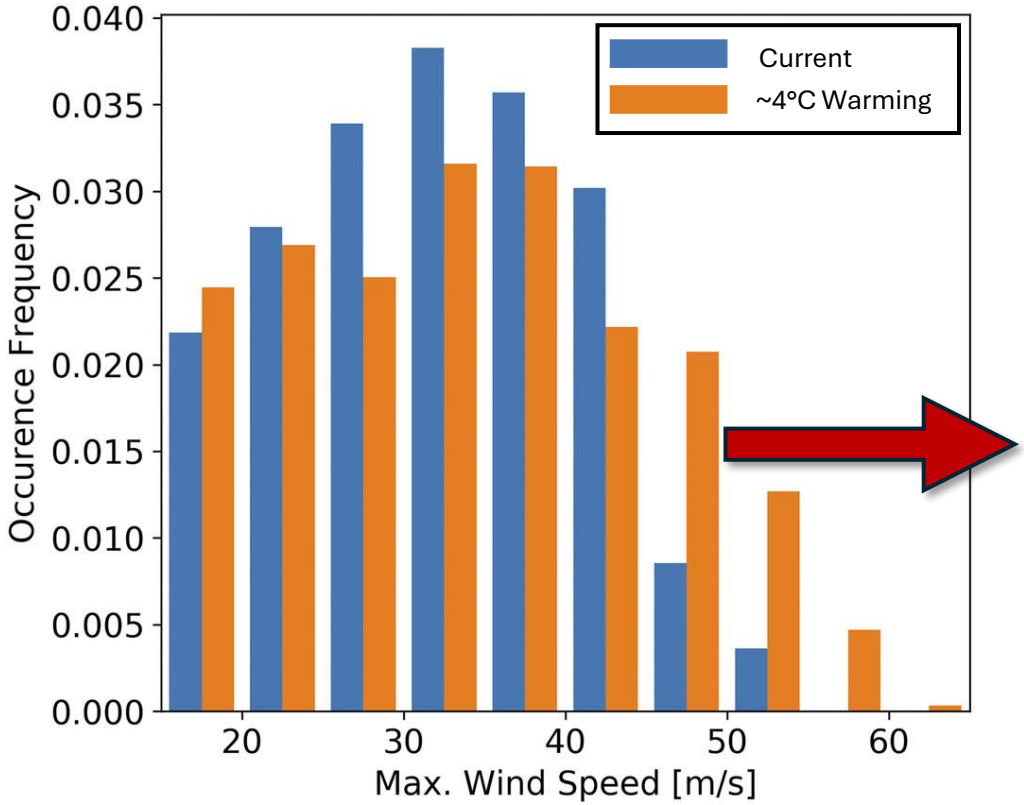
North Atlantic:
~3% in wind intensity
~15% in rainfall rates

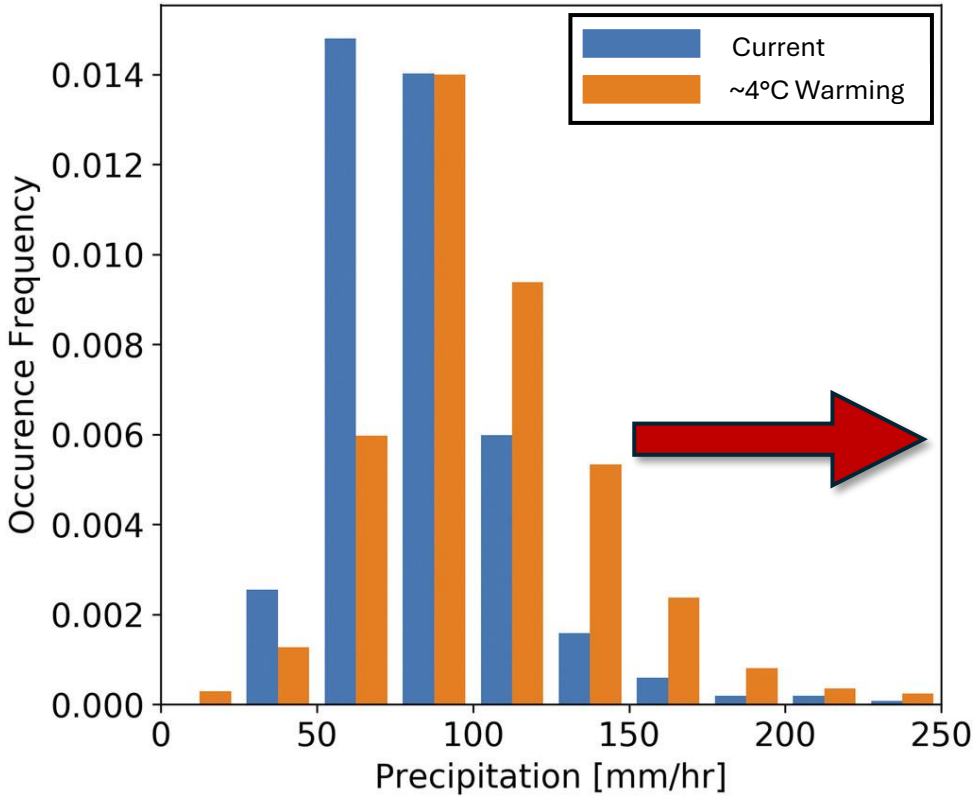
Global:
~5% in wind intensity
~14% in rainfall rates

Knutson et al. (2020)

Stronger, rainier storms with warming

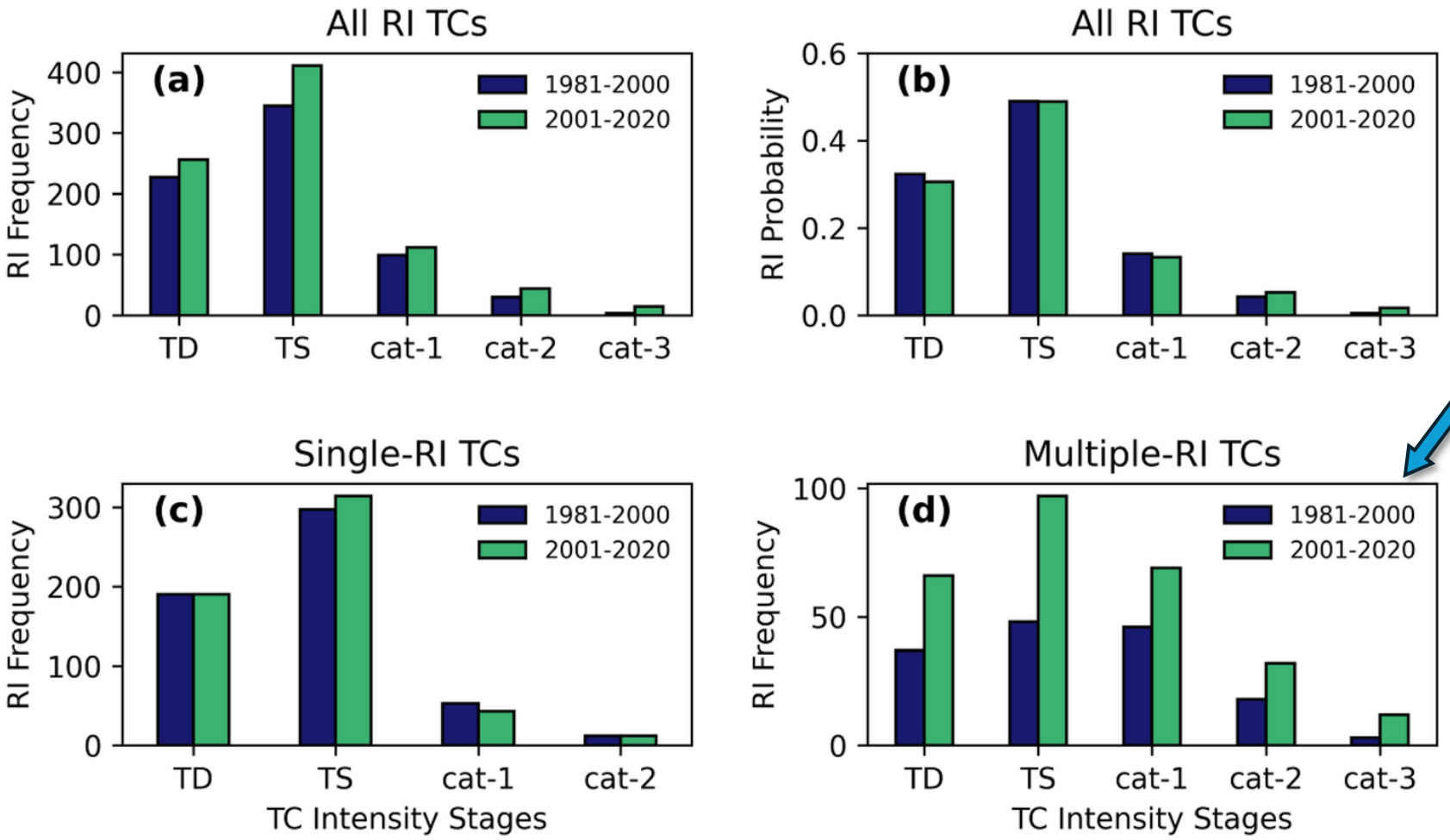
Shift to more intense maximum sustained winds and rainfall rates with warming





Gutmann et al. (2018)

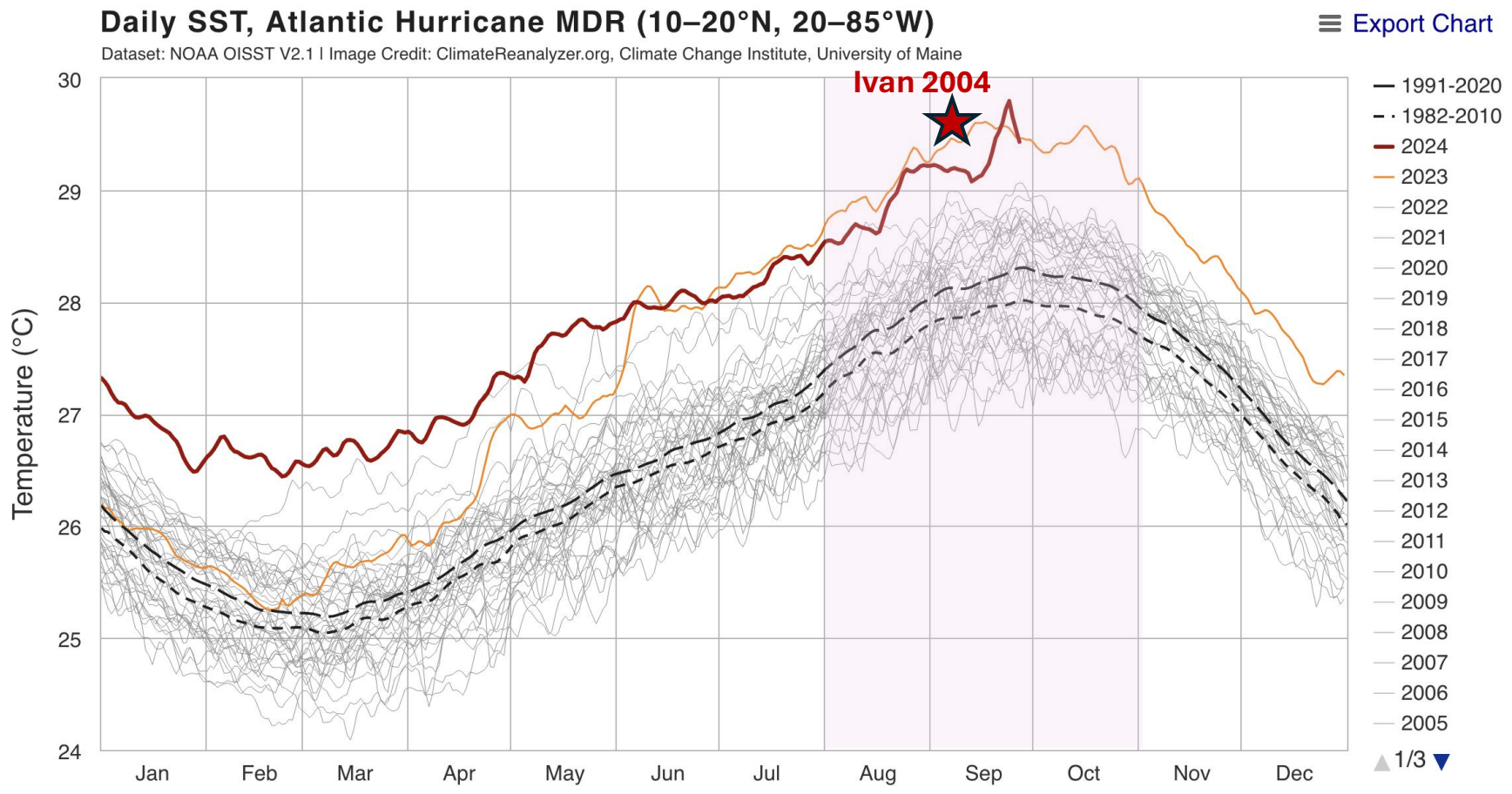
More storms undergoing rapid intensification



Beryl 2024 falls into this category

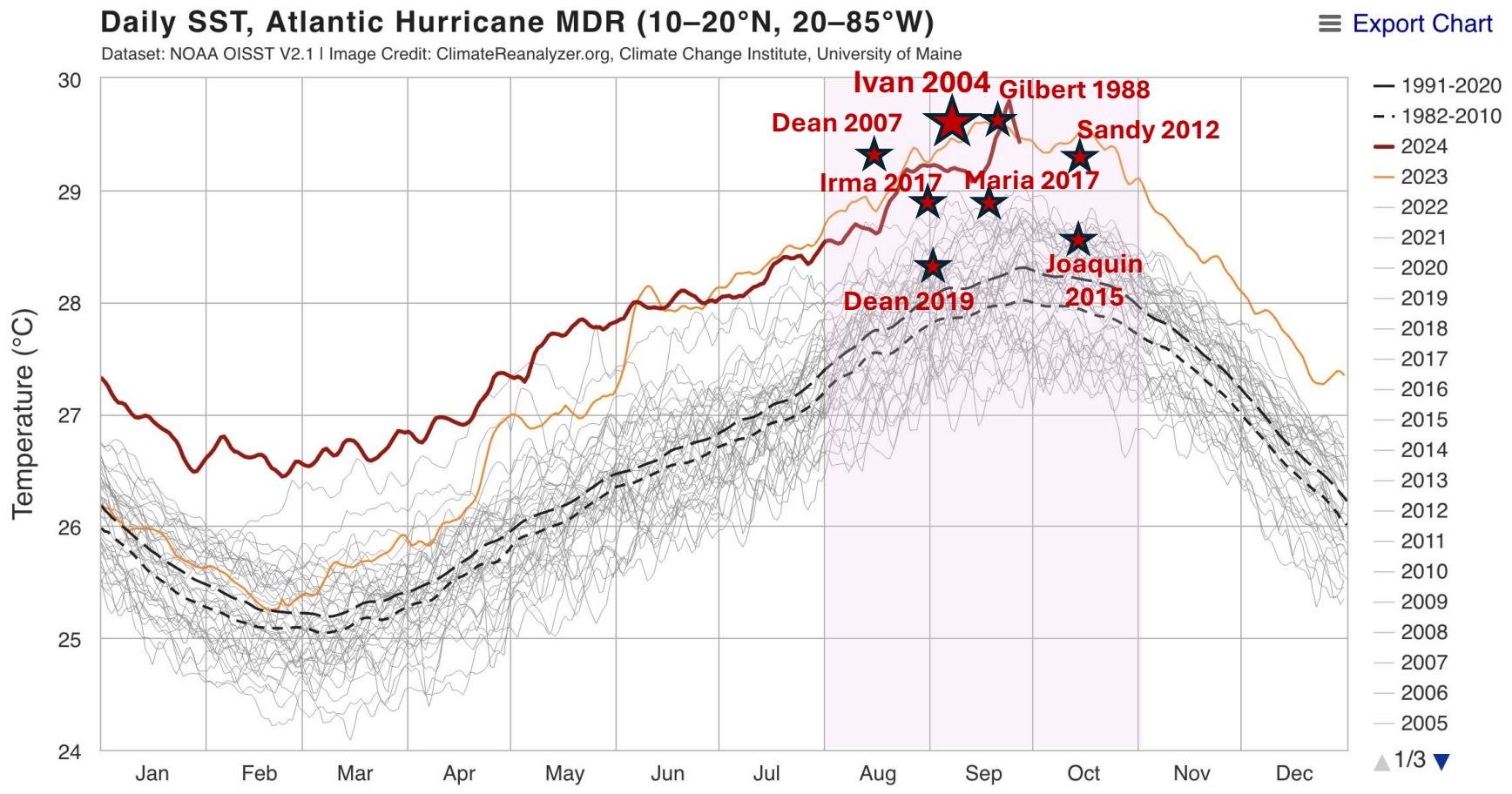
Manikanta et al. (2023)

Potentially longer seasonal peak



Climate Reanalyzer (as of Sept 2024)

Potentially longer seasonal peak



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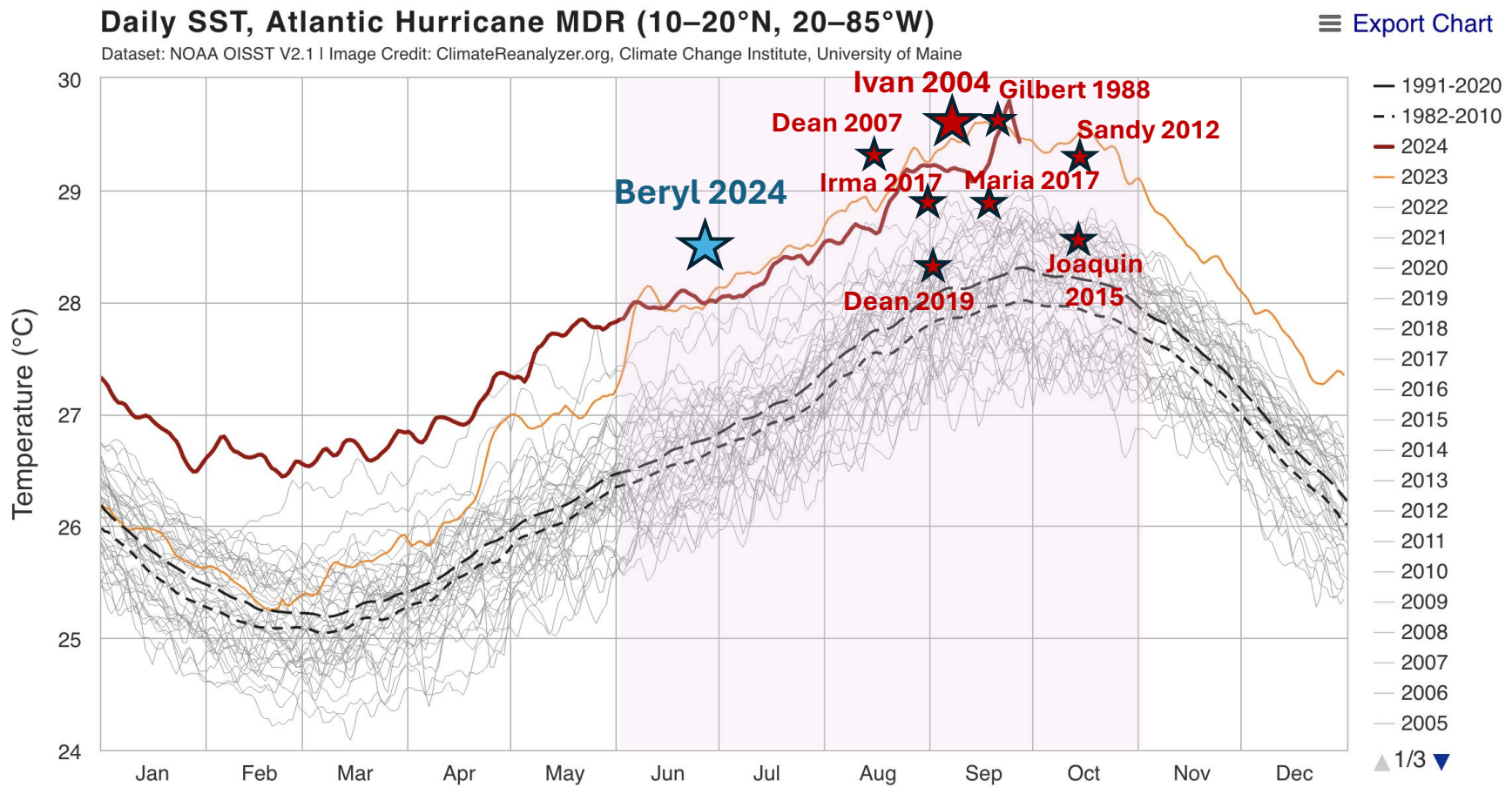

Climate Reanalyzer (as of Sept 2024)

Summary

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