

IEA Wind TEM# 111 on *REANALYSES FOR WIND ENERGY. 25-26, April, 2024*

ASSESSMENT OF WIND CONDITIONS IN REANALYSIS AND DYNAMICALLY DOWNSCALED DATA



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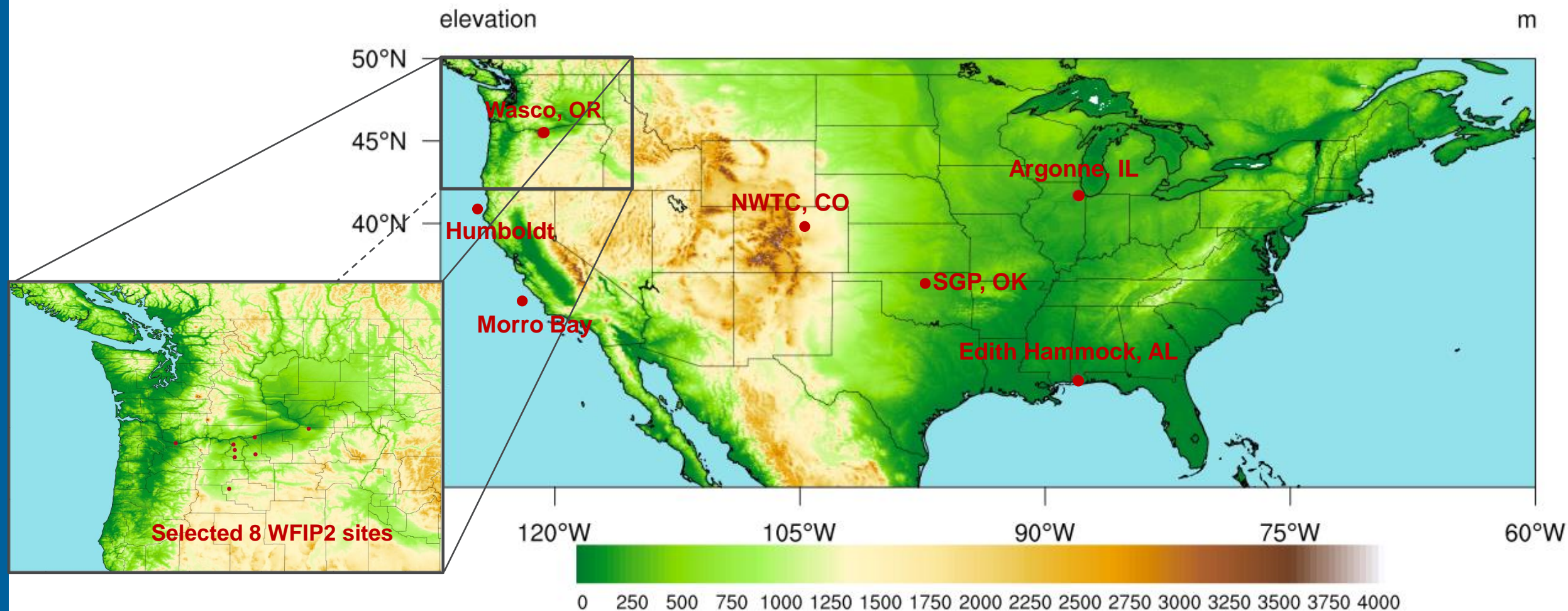
CHUNYONG JUNG (ARGONNE)



U.S. DEPARTMENT OF
ENERGY

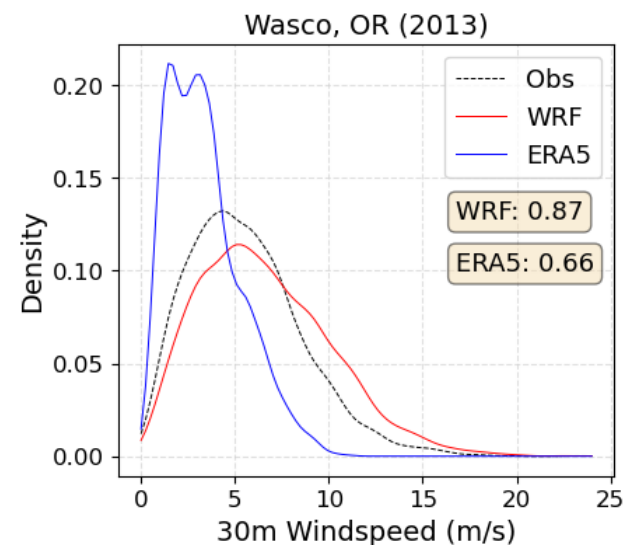
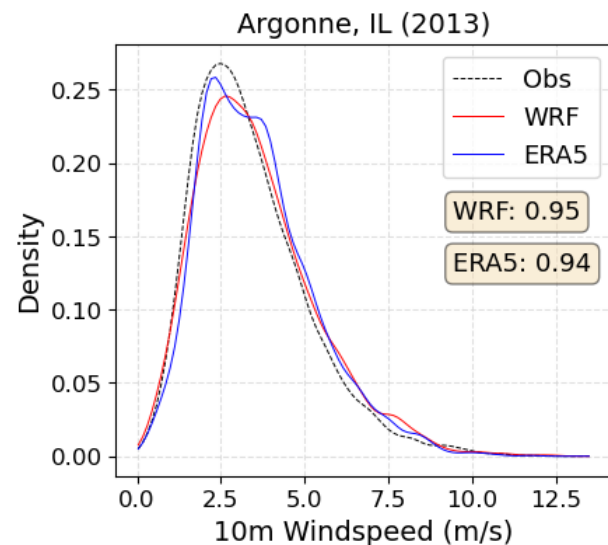
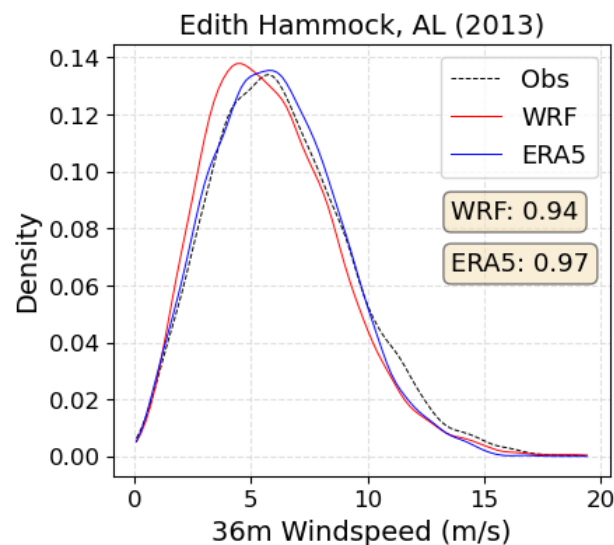
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IN-SITU USED FOR ANALYSIS

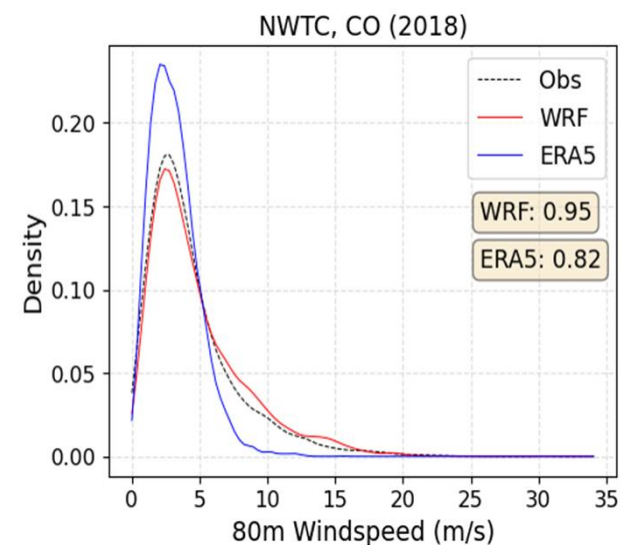
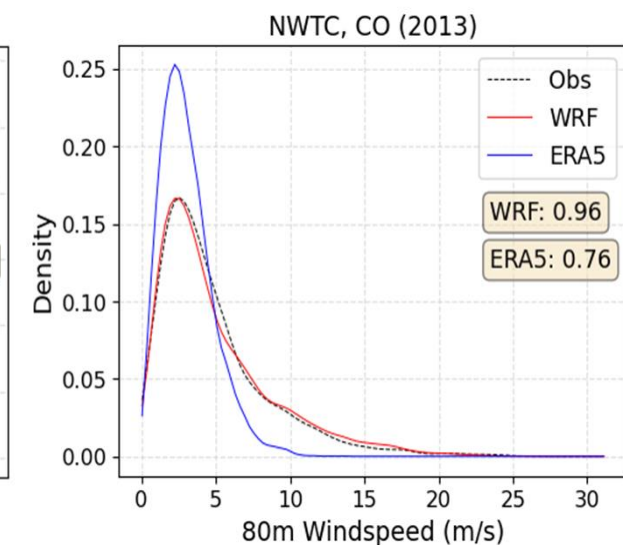
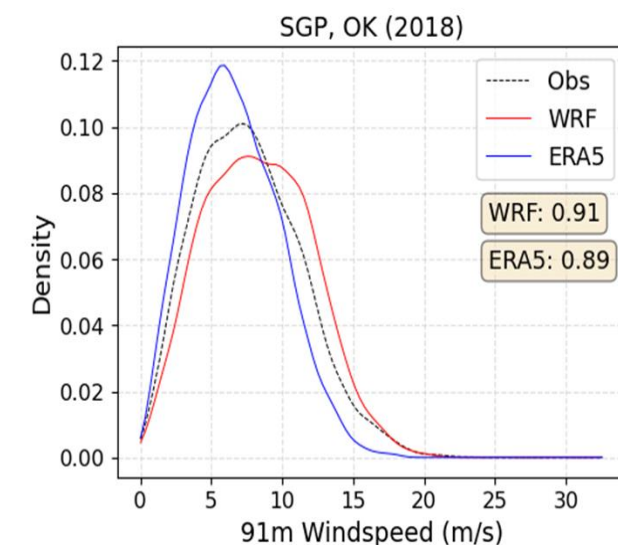
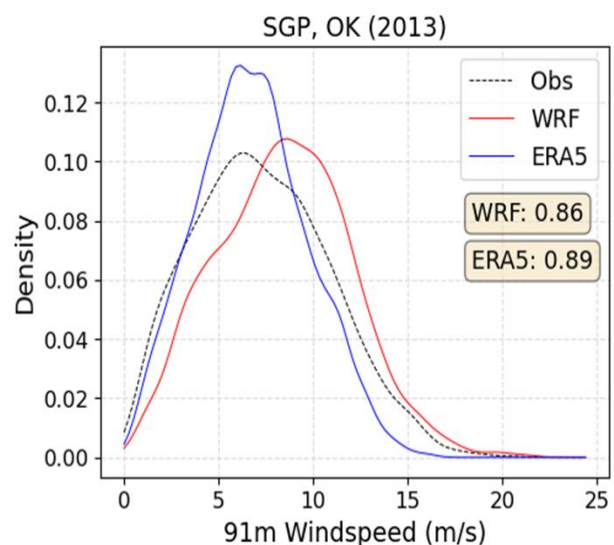


WIND CONDITIONS ONSHORE

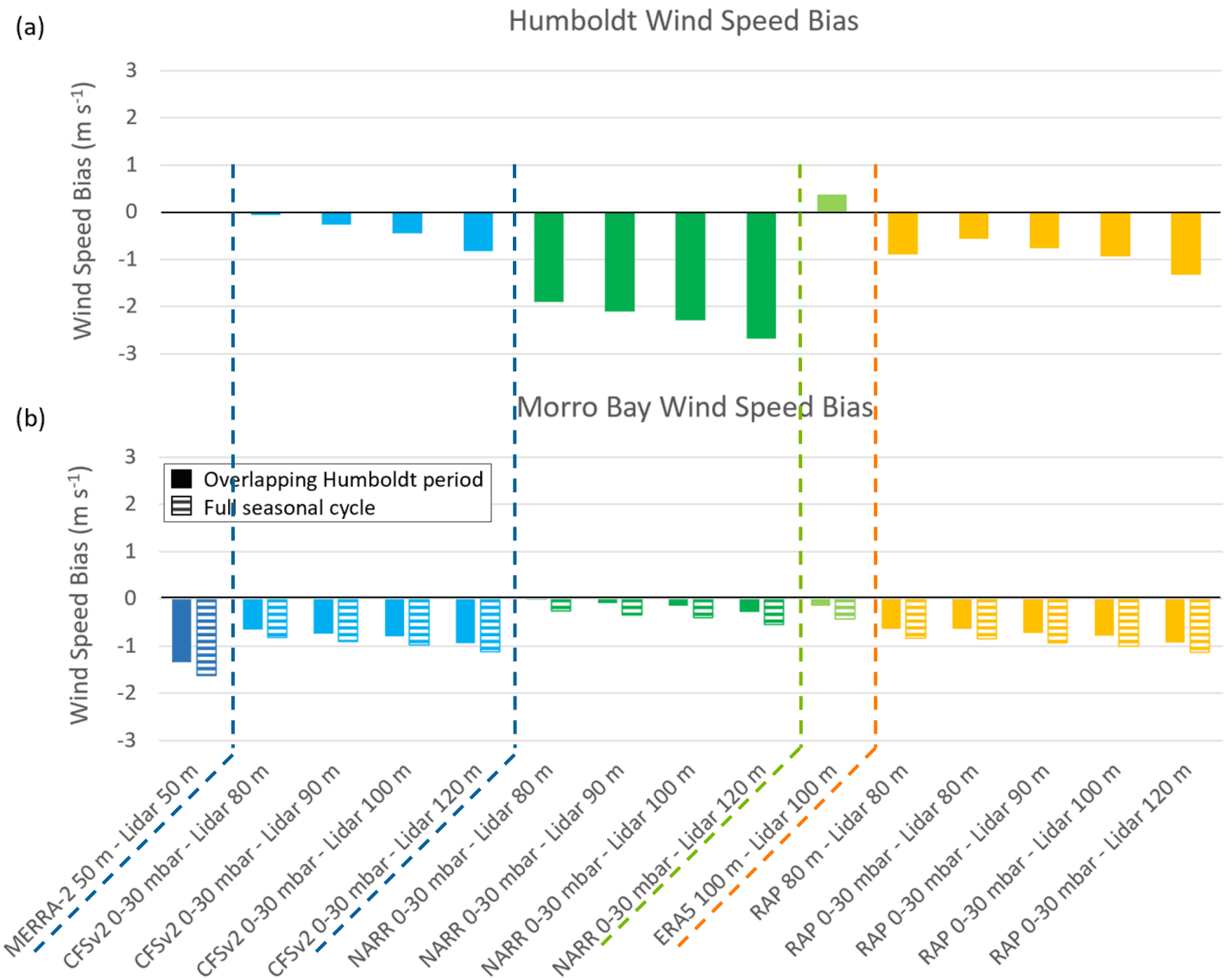
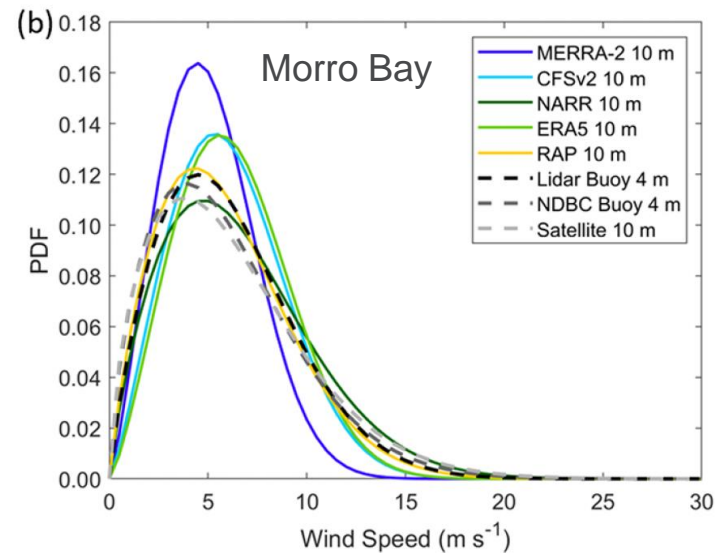
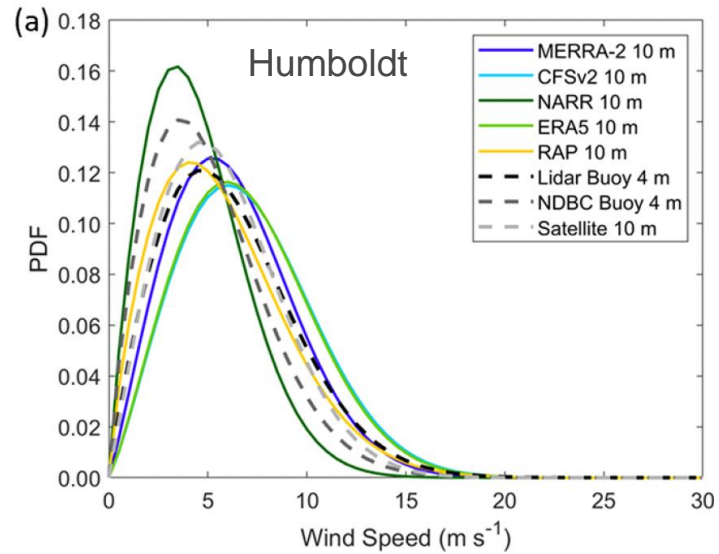
Climate scale: PDFs over various terrain conditions



ERA5 underestimates the wind speeds, especially over complex terrain.

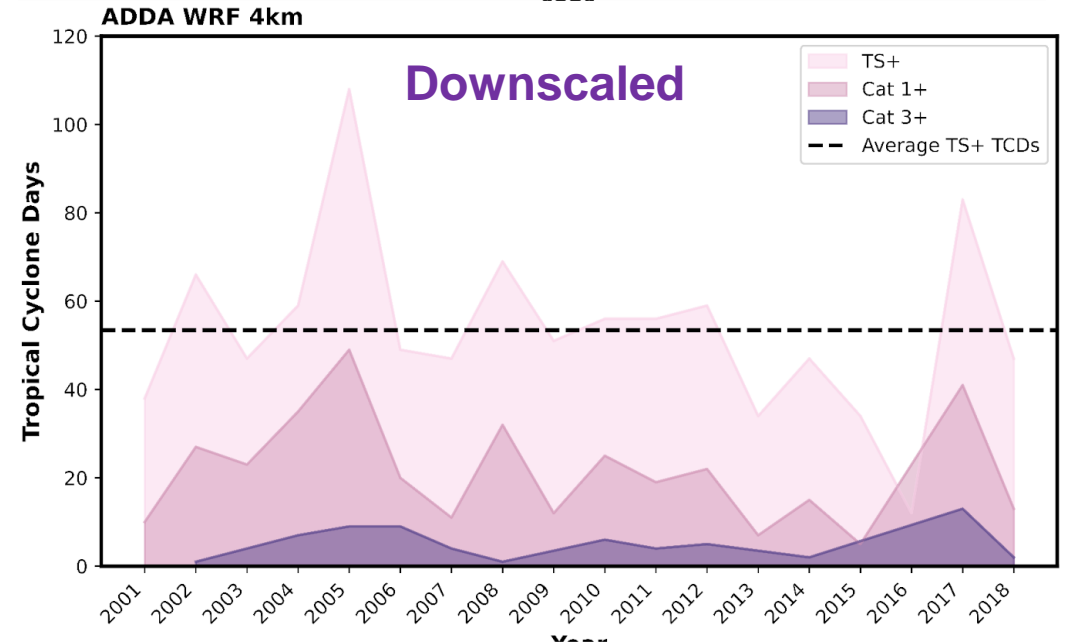
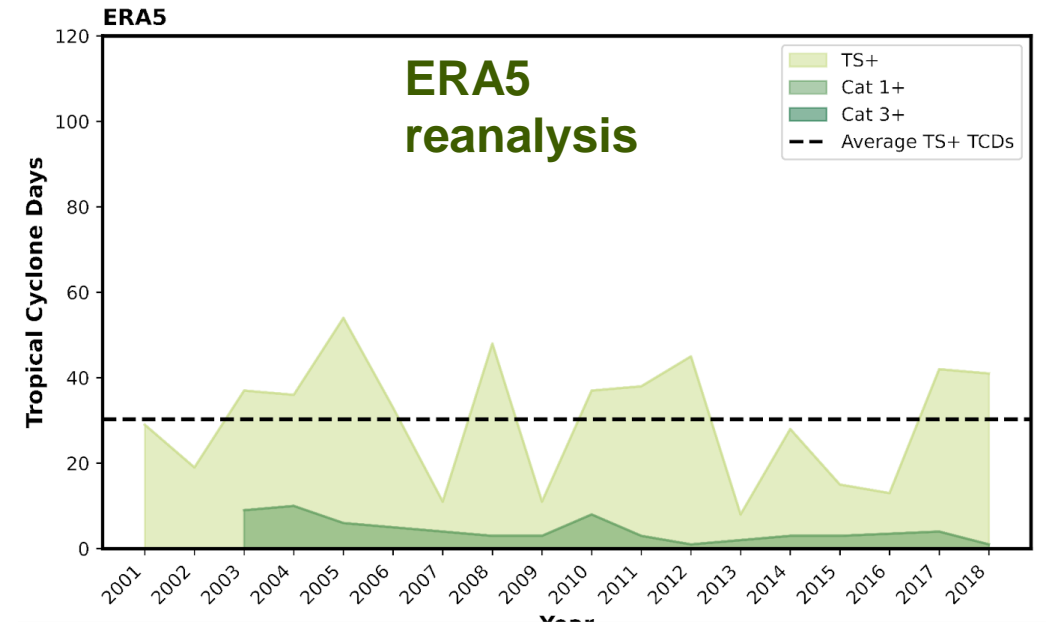
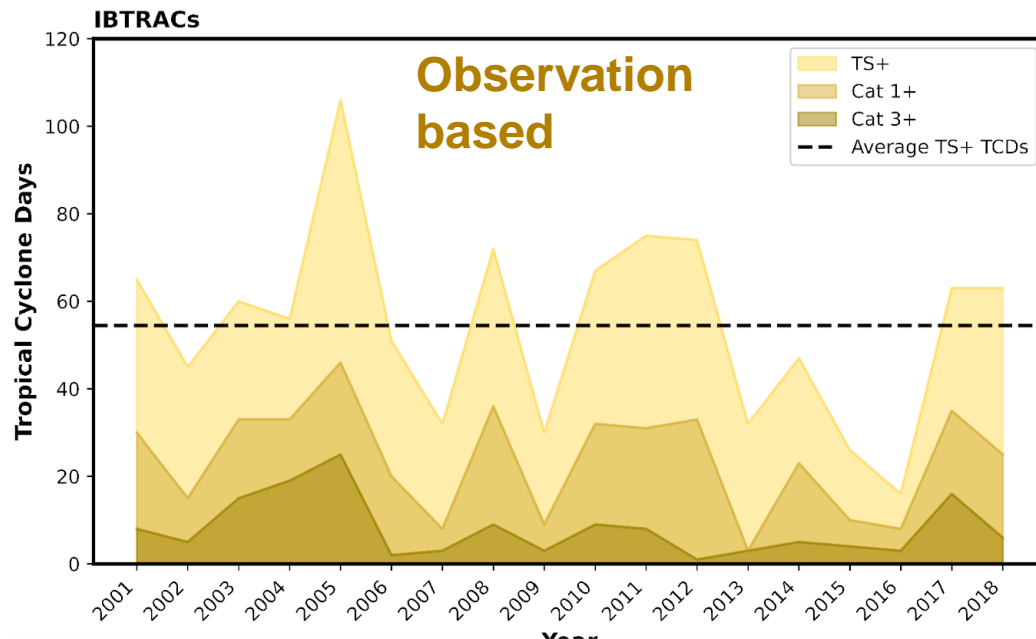


WIND CONDITIONS OFFSHORE



EXTREME WIND CONDITIONS

Tropical storm days in the past 20 years for low to high hurricane categories.



TC STATISTICS IN ADDA 4-KM OUTPERFORM ERA5

