University of Missouri – Atlantic Ocean Basin Tropical Forecast 2025

Predicted (14 April)

	Predicted*	**Observed**	**Difference**
Number of Named Storms:	*16 / 15 / 12*		
Tropical Storms:	*8 / 6 / 5*		
Category 1-2:	*4 / 5 / 4*		
Category 3-5:	*4 / 4 /3*		

Regional (where they will form):	
West Atlantic (to 45° W):	*6*
East Atlantic (to 45° W):	*4*
Gulf of Mexico:	*2*
Caribbean:	*4*

* The format here is us using our traditional techniques versus the linear regression and AI (ACE -Based) model of J.J. Senter.

Reasoning: In 2024 – 2025, we are coming off a weak La Niña and we're expected to migrate toward cold neutral in 2025. This has been the case since December 2024. *The heat is also on as we've now had 4 straight years of hitting the number of hurricanes exactly.* This season is characterized by us being in the westerly phase of the QBO which is less favorable, but we are drifting back toward the easterly phase. During this season, the majority of forecast models are projecting the Eastern Tropical Pacific to warm slightly. This suggests a reasonable correlation towards an above average number of Atlantic-based storms during the projected ENSO state. This is predominantly due to a combination of eastern/central Atlantic-based subtropical shear. Also, there is the prospect for a warm Gulf of Mexico so any storms that form or drift into the region could be very strong. Additionally, based on the 30 to 60-day evolution of the Intraseasonal Oscillation (ISO) (aka MJO), the MJO is strengthening a bit currently and is projected to continue moving forward. Based on the current near 50-day cycle, this projection would land more conducive MJO impacts towards Africa and the North Atlantic during mid-June early-to-mid August and late September / early October. This is the same as last year. And this pattern basically verified. We referenced climatological research from a few different analog platforms. We looked at dying La Niña years recently from 1999, 2008, 2011, 2018, 2021 as well as others beforehand. All of these years suggest around 16 storms. Additional analogs are some PDO negative analogs

(1965, 1968, 1971, 1974). We're keeping our projections high as the number of tropical storms in the last few years have been under-forecast likely due to better identification of them through improved satellite technology. This year we're also employing a new AI predictive tool based on the work of J.J. Senter as well as considering our first-ever December 2024 forecast from Sawyer Jackson which is similar to these final numbers. The forecasters this year are: Sarah Weaver, Sawyer Jackson, Atabak Sadeghi, Joe Renken, Jason J. Senter and Tony Lupo