



University of Missouri – Atlantic Ocean Basin Tropical Forecast 2024

	Predicted (XX April)		
	Predicted	Observed	Difference
<i>Number of Named Storms:</i>	26		
<i>Tropical Storms:</i>	15		
<i>Category 1-2:</i>	6		
<i>Category 3-5:</i>	5		
<i>Regional (where they will form):</i>			
<i>West Atlantic (to 45° W):</i>	12		
<i>East Atlantic (to 45° W):</i>	7		
<i>Gulf of Mexico:</i>	3		
<i>Caribbean:</i>	4		

Reasoning: In 2023 – 2024, we are coming off an El Niño interlude in a La Niña period. During this season, the majority of forecast models are projecting the Eastern Tropical Pacific to cool down and we'll either be cold neutral or full blown La Niña by fall. Previous research has suggested a reasonable correlation towards an above average number of Atlantic-based storms during this projected ENSO state. This is predominantly due to a combination of eastern/central Atlantic-based subtropical shear, and this year the easterly QBO may be a little more favourable to development. Also, the 800 lb gorilla in the room is the warm North Atlantic. Temperatures are extremely warm in the Atlantic at this and they should remain that way. 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 early August and late September / early October if one projects out along the same path MJO has taken. However, depending upon the ongoing intensity of these projected MJO convective event rates of propagation, it may be less or more of a factor even during peak-season times. We referenced climatological research from a few different analog platforms. We looked at La Nina years recently from 1998, 2007, 2010, 2016, 2017, and 2020 as well as others beforehand. All of these years suggest around 20 storms. Additional analogs are some PDO negative analogs (1964, 1973) as well as PDO positive (1983, 1988, 1995). 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. The forecasters this year are: Sarah Weaver, Thomas Schwent, Atabak Sadeghi, Joe Renken, and Tony Lupo