University of Arizona (UA) Forecasts a Very Active Hurricane Season

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The University of Arizona (UA) forecasting team updated their April predictions and still forecast a much above average year. Our updates are as follows:

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| --- | --- | --- | --- | --- |
|  | 2024 June Prediction | Probability Range | 2024 April Prediction | Median Since 1980 |
| Hurricanes | 10 | 8 to 12 (63%) | 11 | 7 |
| Major Hurricanes | 5 | 4 to 6 (70%) | 5 | 2 |
| Named Storms | 23 | 20 to 26 (74%) | 21 | 14 |
| ACE | 231 | 191 to 271 (70%) | 156 | 107 |

Our June total predicted tropical activity is higher in ACE and named storms, the same in major hurricanes, and a little lower in hurricanes when compared to our April prediction.

March/April/May tropical sea surface temperatures are the most significant factor in our June model. Temperatures are running extremely warm, in fact, the warmest in our data set.

We made adjustments to our model to better account for ENSO. We now use European Model data to forecast Niño 3.4 conditions during peak hurricane season but only include this variable in our dataset when the anomaly is sufficiently high. For 2024, we do not anticipate ENSO to be much of a factor.

We also look at the Atlantic zonal pseudo-wind stress in the North Atlantic. The values this year will provide a small dampening effect on total activity.

Our average errors for our hurricane outlooks since we first started issuing them in 2014 is 2.1 hurricanes. Since 2017, when we started issuing forecasts for ACE and major hurricanes, our average error has been 43 units and 0.9 major hurricanes. For named storms, for which we started issuing predictions in 2019, our average error has been 4.6.

Due to the factors above – extremely warm sea surface temperatures and likely light shear – this season has the potential to be one of the most active ever. Of course, other factors that are not predictable this far in advance can influence the season, and we will see if they are able to provide some relief.

Reference: Kyle Davis, Xubin Zeng, and Elizabeth A. Ritchie, 2015: A New Statistical Model for Predicting Seasonal North Atlantic Hurricane Activity. Wea. Forecasting, 30, 730–741, doi: 10.1175/WAF-D-14-00156.1

Davis, K. and X. Zeng, 2019: [Seasonal Prediction of North Atlantic Accumulated Cyclone Energy and Major Hurricane Activity.](https://journals.ametsoc.org/doi/abs/10.1175/WAF-D-18-0125.1) Wea. Forecasting, 34, 221–232,<https://doi.org/10.1175/WAF-D-18-0125.1>

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