StormGeo’s tropical experts monitor and project several regional and global factors when developing the seasonal forecast.

These factors include Atlantic and Pacific Ocean water temperatures, global wind and pressure patterns and past tropical seasons which share the weather features of the current tropical season. Based on these factors, StormGeo tropical meteorologists expect slightly fewer storms than the 30-year seasonal average for the coming Atlantic Hurricane Season.

**El Niño**
One of the more well-known global weather features is El Niño. Historically, El Niño refers to atypical warming of the Eastern and Central Pacific tropical waters. The presence of an El Niño temperature regime typically signifies enhanced thunderstorm activity across the Tropical Pacific. High-level outflow from these storms tracks eastward over the Atlantic waters, where it sinks, resulting in diminished thunderstorms in the Deep Tropics. This inhibits tropical development across the Caribbean Sea and the Tropical Atlantic. In addition, an El Niño typically produces increased westerly winds aloft over the Caribbean Sea and the Tropical Atlantic. These westerly winds flow opposite to the east-to-west trade winds, resulting in increased wind shear—another inhibiting factor in regards to tropical storm development.

Earlier projections in March and April suggested a moderate to weak El Niño persisting into the peak of the season (August through October). However, the most recent forecasts now show a very weak El Niño by peak season. This means El Niño would have less influence and would therefore be only a very slight inhibiting factor towards hurricane development in the Deep Tropics this season.

**Atlantic**
Like the water temperatures of the eastern Tropical Pacific, Atlantic Ocean water temperatures play a crucial role in tropical development, as warmer water translates into more energy for developing storms. However, the Atlantic endures decades-long cycles of cooler- or warmer-than-normal temperatures that have a
long-lasting effect on seasonal storm counts. The most recent warm phase of the Atlantic Multi-decadal Oscillation (AMO) began in 1995 and was noted by a significant uptick in hurricane activity. However, the warm phase has likely ended, as cooler-than-normal temperatures have been observed since late 2013. This indicates the beginning of a new cool cycle, which should translate into less hurricane activity, on average, for the next 20+ years.

When predicting seasonal hurricane activity, meteorologists examine spring months of past seasons for similarities to the present. If similar patterns of surface pressure and oceanic temperatures in both the Atlantic and Pacific can be found, then those seasons might provide clues to the upcoming hurricane season. We call such years with similar weather and oceanic patterns ‘analog years.’ Determining these analog years requires significant research by tropical and climate experts.

Analog Years
For 2019, analog years identified by StormGeo suggest below-normal activity between the eastern Caribbean and the coast of Africa—the ‘Main Development Region.’ This is similar to last season. Disturbances that develop farther west, perhaps in the Western Caribbean, could threaten the northern Gulf Coast, as Hurricane Michael did in 2018. With the jet stream over the U.S. predicted to shift westward this summer (as compared to 2018), the entire U.S. East Coast may be open to hurricane impacts this season, rather than just south of the Carolinas.

Forecast
Given the above, the StormGeo Atlantic Hurricane forecast is slightly below 30-year seasonal norms. Our prediction is for 14 named storms in 2019. Of those, 6 may reach hurricane intensity, with 2 of the hurricanes becoming intense (Category 3, 4, or 5). There is a decreased risk of significant hurricane activity across the islands of the eastern Caribbean, and close to normal, perhaps slightly below normal risk to the area from southeast Louisiana to Cape Cod.

No matter the forecast, StormGeo urges all with tropical concerns to always prepare for the one storm that may affect you or impact your location.