Factors & Considerations:

IOD in Neutral phase
- promotes increased activity

Significantly increased water temperatures

// StormGeo tropical experts forecast an above-normal typhoon season for 2020

The Northwest Pacific Ocean basin is the most active basin in the world, averaging 26 named storms each season, including 13 typhoons. Typhoons can form in any month, though most tropical cyclones form between June and November. In 2019, there were 28 named storms, including 15 typhoons, which is a little above normal for the past 30 seasons. Activity was concentrated from the northern Philippines through Japan, with limited typhoon impacts across the central to southern Philippines into the South China Sea.

// Indian Ocean Dipole

The Indian Ocean Dipole (IOD) is a phenomenon similar to El Niño in the Tropical Pacific. The IOD refers to the difference in sea surface temperature across the eastern

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North Indian Ocean and the western Indian Ocean. During a positive phase, increased easterly trade winds blow across the North Indian Ocean, resulting in upwelling of cooler water across eastern parts of the basin. The stronger trade winds pile up warmer water across the Arabian Sea, southward all the way to Madagascar. The warmer water promotes enhanced thunderstorms and tropical cyclone activity across the Arabian Sea. Conversely, a positive IOD generally results in decreased tropical cyclone activity across the Bay of Bengal. The impact of the IOD is not confined to the Indian Ocean, however. The strongly-positive IOD of 2019 extended across the South China Sea to east of the Philippines. This is one of the main reasons for the lack of typhoon activity there last season.

For 2020, the warm water anomaly in the western Indian Ocean has abated. Conditions across the Indian Ocean have returned to normal. For this typhoon season, models are predicting that the IOD will remain in the neutral phase, but it may edge close to a negative phase during the peak of this year’s typhoon season. We are already seeing significantly increased water temperatures across the Bay of Bengal and the South China Sea. Above-normal water temperatures extend well east of the Philippines, where water temperatures were below normal in 2019.

// Long-Range Model Forecasts

The European model has shown some skill in predicting seasonal tropical cyclone activity across various ocean basins. For 2020, the European model is predicting well above-normal precipitation from the southern Bay of Bengal, east across the central to southern South China Sea and extending east of the Philippines. This is in agreement with the IOD prediction, indicating an increased risk of typhoon activity across the central to southern Philippines and South China Sea this season.

We think that tropical cyclone activity across the West Pacific will be above-normal this season. Even though the basin has remained quiet through April, there are signs that conditions are gradually becoming favorable for development there. The current warm water anomaly, combined with a prediction of a neutral to slightly negative IOD that would enhance the warm water anomaly across the South China Sea to east of the Philippines may lead to enhanced typhoon activity farther south this season. For this reason, we think that the prime area to watch for significant typhoon activity this season will be across the Philippines west through the South China Sea. Farther north, we think that there will be a normal typhoon risk from southern China through Korea and Japan. We are predicting a total of 28 named storms in the Northwest Pacific this season, with 15 of them becoming typhoons.

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.