

Extended Range Forecast for Northwest Pacific Typhoon Activity in 2026

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TSR predicts an active Northwest Pacific typhoon activity in 2026 with activity around 25% above the 1991-2020 30-year norm.

Summary

The TSR (Tropical Storm Risk) early May forecast for Northwest Pacific typhoon activity in 2026 anticipates the most active season since 2015. TSR uses the strong link ($R^2 = 0.80$; 1993-2024) between the annual Northwest Pacific ACE index and August-September-October (ASO) ENSO combined with trade wind anomalies across the western equatorial Pacific through April, activity to-date and the Pacific Decadal Oscillation (PDO). Although sizable uncertainties remain and the forecast skill at this range is historically low, TSR anticipates there is an 89% likelihood that Northwest Pacific ACE in 2026 will be above the 1991-2020 climate norm.

1. TSR May 2026 Northwest Pacific Seasonal Typhoon Activity Forecast

Further information on the TSR statistical prediction models and adjustments that are used to generate the forecasts below can be found in [Section 2](#) of Supplementary Information.

1.1. Forecast Northwest Pacific ACE Index and System Numbers in 2026:

		ACE Index	Intense Typhoons	Typhoons	Tropical Storms
TSR Forecast	2026	410	11	18	27
30-yr Climate Norm	1991-2020	301	9.3	16	25.5
10-yr Climate Norm	2016-2025	250	8.4	14.2	24
Forecast Skill at this Lead	2016-2025	0%	0%	0%	0%

The forecast tercile probabilities (1991-2020 data) for the 2026 Northwest Pacific typhoon season ACE index are as follows: an 82% probability of being upper tercile, a 12% likelihood of being middle tercile and only a 4% chance of being lower tercile.

1.2. Forecast Probability of Exceedance Plot for the Northwest Pacific ACE index in 2026:

See [Section 3](#) in the Supplementary Information for the motivation behind the probability of exceedance chart. Figure 1 displays our current forecast for the 2026 Northwest Pacific ACE index in terms of PoE. The forecast PoE curve is computed using the robust method described in Section 3 of Saunders et al. (2020) while the climatology PoE curve is computed directly from observations. The figure specifies the current chance that a given ACE index will be reached in 2026 and how this chance compares to climatology.

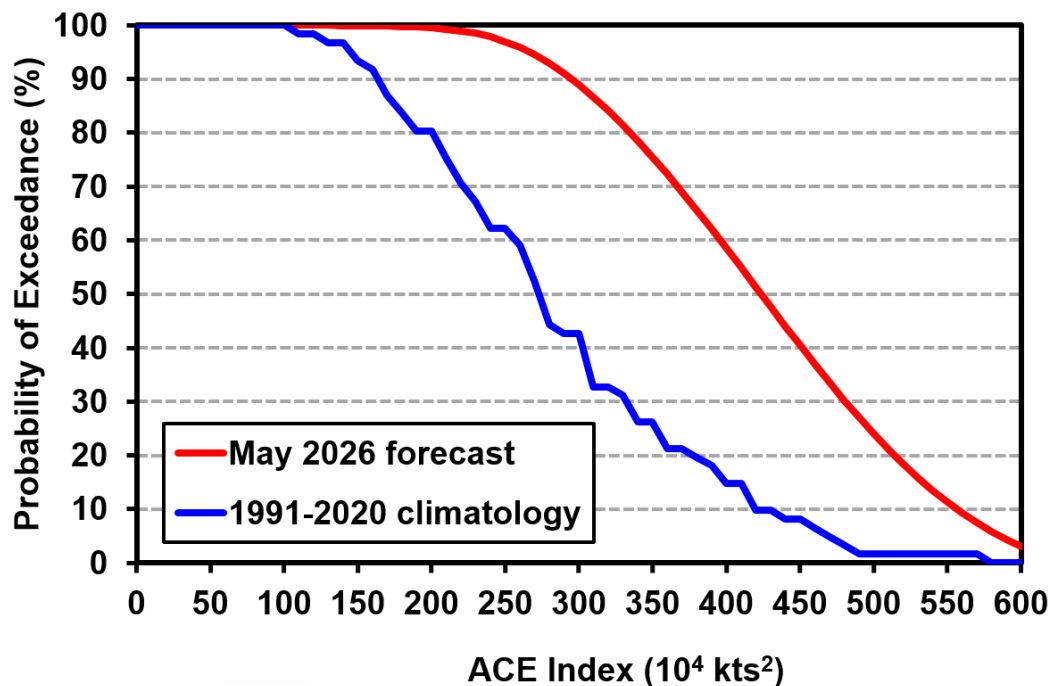


Figure 1: Forecast probability of exceedance (PoE) plot for the Northwest Pacific ACE index in 2026. The plot displays two sets of PoE data comprising the TSR forecast PoE curve issued in early May and the 1991-2020 climatology PoE curve.

2. Factors Influencing the May 2026 TSR Forecast

ENSO: The consensus forecast value for ASO ENSO ONI that we employ is 1.5°C , which corresponds to strong El Niño conditions. We believe ENSO will have a strong enhancing influence on NW Pacific typhoon activity in 2026.

Equatorial Zonal Wind Speed: There is a small correlation (Pearson $r^2=0.28$) between the April zonal wind speed anomaly across the region $5^{\circ}\text{S}-5^{\circ}\text{N}$, $140^{\circ}\text{E}-180^{\circ}$. Stronger-than-

normal Easterly winds across this region is linked to below-average NW Pacific typhoon activity. The April 2026 wind anomaly is 2.6 ms^{-1} i.e. stronger westerlies than normal, which would be consistent with an above-average NW Pacific typhoon season in 2026.

Activity-to-date: There is a small correlation (Pearson $r^2=0.20$) between the ACE index through the year up to the 11th May and total seasonal NW Pacific ACE index. The 2026 ACE index to-date is 45, which is the eighth highest to date since 1965 and is consistent with an above-average NW Pacific typhoon season. Of the nine years since 1965 where the year-to-date ACE index was at least 35, seven saw an ACE index above the 1991-2020 climatology and three saw an ACE index well above the current TSR forecast.

Pacific Decadal Oscillation: The Pacific Decadal Oscillation (PDO) is often described as a long-lived El Niño pattern of Pacific climate variability. Warm phases of the PDO are linked to enhanced typhoon activity and vice-versa. Through April 2026 the PDO has been in a negative phase which historically tends to suppress typhoon activity, however the correlation between April PDO and upcoming typhoon activity over the period 1965-2025 is weak (Pearson $r^2 \sim 0.05$). The PDO may have a small suppressing effect on NW Pacific typhoon activity in 2026.

2. Confidence and Uncertainties

ENSO: Our expectation for moderate or strong El Niño conditions through ASO 2026 has high confidence. The majority of the model forecasts provided by IRI are forecasting at least moderate El Niño conditions during ASO 2026 with around half of the model forecasts predicting a strong El Niño.

Skill: Historically, the skill from early May forecasts for Northwest Pacific typhoon activity is low (see [Section 4b](#) in the Supplementary Information). This is due to the typical sizeable uncertainty in the ASO ENSO ONI value at this four-month lead and because even if the ASO ONI value is anticipated correctly a spread in ACE levels can still ensue. Favourable or unfavourable intra-seasonal factors which cannot be predicted can also influence overall activity.

3. Next Forecast

The next TSR forecast update for the 2026 Northwest Pacific typhoon season will be issued on Tuesday 7th July, 2026.