June Forecast Update for Northwest Pacific Typhoon Activity in 2003

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by Drs Adam Lea and Mark Saunders
Benfield Hazard Research Centre, UCL (University College London), UK

Forecast Summary

TSR anticipates the 2003 Northwest Pacific typhoon season will see activity slightly below average.

The TSR (Tropical Storm Risk) early June forecast update for Northwest Pacific typhoon activity in 2003 anticipates a slightly below average season. The forecast spans the full Northwest Pacific season from 1st January to 31st December 2003 and is based on data available through the end of May 2003. The TSR predictor is the forecast anomaly in August-September Niño 4 sea surface temperature (SST) which we anticipate will be -0.17±0.30^{o}C cooler than normal this summer. The appendix gives the TSR predictions from previous months.

NW Pacific ACE Index and System Numbers in 2003

		ACE Index	Intense Typhoons	Typhoons	Tropical Storms
TSR Forecast (±FE)	2003	275 (±89)	7.9 (±2.3)	16.1 (±4.1)	25.8 (±4.8)
10yr Climate Norm (±SD)	1993-2002	300 (±113)	9.1 (±3.2)	17.2 (±4.7)	27.8 (±5.0)
30yr Climate Norm (±SD)	1973-2002	285 (±97)	8.0 (±3.0)	16.6 (±3.7)	26.3 (±4.3)
Forecast Skill at this Lead	1988-2002	45%	53%	29%	15%

Key: ACE Index = Accumulated Cyclone Energy Index = Sum of the Squares of 6-hourly Maximum Sustained Wind Speeds (in units of knots) for all Systems while they are at least Tropical Storm Strength. ACE Unit = x10^4 knots^2.
Intense Typhoon = 1 Minute Sustained Wind > 95Kts = Hurricane Category 3 to 5.
Typhoon = 1 Minute Sustained Wind > 63Kts = Hurricane Category 1 to 5.
Tropical Storm = 1 Minute Sustained Wind > 33Kts.
SD = Standard Deviation.
FE (Forecast Error) = Standard Deviation of Errors in Replicated Real Time Forecasts 1993-2002
Forecast Skill = Percentage Improvement in Mean Square Error over Running 10-year Prior Climate Norm from Replicated Real Time Forecasts 1988-2002.
Northwest Pacific = Northern Hemisphere Region West of 180^{o}W Including the South China Sea. Any Tropical Cyclone (Irrespective of Where it Forms) Which Reaches Tropical Storm Strength Within this Region Counts as an Event.

Key Predictor for 2003

The key factor behind our forecast for a slightly below average Northwest Pacific typhoon season in 2003 is the anticipated slightly cooler than average Niño 4 (150^{o}W-160^{o}E, 5^{o}S-5^{o}N) SST anomaly. The TSR forecast anomaly (1973-2002 climatology) for August-September 2003 Niño 4 SST is -0.17±0.29^{o}C (down slightly from -0.09±0.30^{o}C last month). The forecast skill for this predictor at this lead is 72%.

Further Information

Further information on the TSR forecast methodology, the TSR replicated real-time forecast skill 1987-2001 as a function of lead time, and on TSR in general, may be obtained either from the 'Extended Range Forecast for Northwest Pacific Typhoon Activity in 2002' document issued on the 6th March 2002 or from the TSR web site tropicalstormrisk.com. Our next monthly forecast update for the 2003 Northwest Pacific typhoon season will be issued on the 4th July 2003.

Appendix - Predictions from Previous Months

NW Pacific ACE Index and System Numbers 2003					
		ACE Index	Tropical Storms	Typhoons	Intense Typhoons
Average Number (±SD) (1993-2002)		300 (±113)	27.8 (±5.0)	17.2 (±4.7)	9.1 (±3.2)
Average Number (±SD) (1973-2002)		285 (±97)	26.7 (±4.3)	16.6 (±3.7)	8.0 (±3.0)
TSR Forecasts (±FE)	10 Jun 2003	275 (±89)	25.8 (±4.8)	16.1 (±4.1)	7.9 (±2.3)
	6 May 2003	284 (±84)	26.0 (±4.9)	16.3 (±4.1)	8.2 (±2.3)
	11 April 2003	318 (±102)	26.7 (±5.1)	17.1 (±4.5)	9.2 (±2.9)
	5 March 2003	297 (±100)	26.2 (±5.1)	16.6 (±4.5)	8.5 (±2.9)
Chan Forecast (±SD)	24 April 2003	-	26 (±3)	16 (±2)	-