

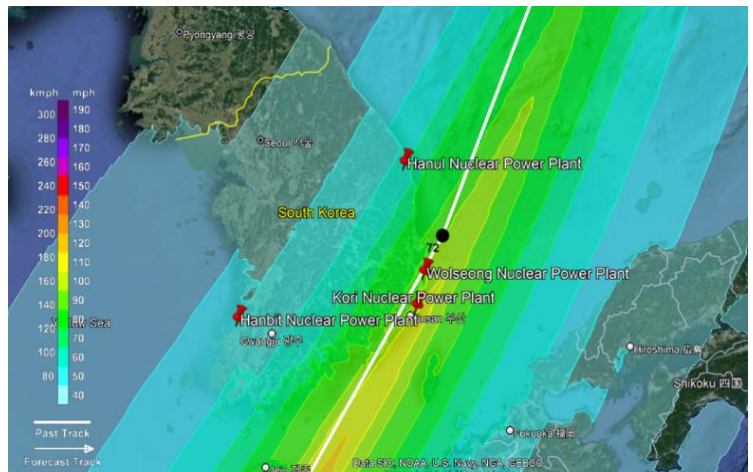
## Predicting Damage to Critical Infrastructure from Tropical Cyclones

With climate change driving the increasing frequency of catastrophic weather events around the world it is more important than ever that risk managers within global organisations have a rapid and comprehensive view of the risks to critical infrastructure. As an example, in August 2022 Typhoon Hinnamnor swept up the East China Sea and across the southern tip of South Korea. Hinnamnor was one of the most powerful storms to hit the country with winds exceeding 100 mph. Oil refineries and chemical plants were placed on high alert. Many industrial sites suspended production and three reactors at the Kori Nuclear Power Plant were forced to reduce their output.



Typhoon Hinnamnor formed as a tropical storm in the NW Pacific, approximately 1200km SW of Tokyo on Sunday 28 August 2022. The following day it was forecast to rapidly strengthen and pass close to Okinawa, NW of Taiwan with a 25% chance that winds would reach at least Category 1 on the Saffir Simpson scale at landfall (1-minute sustained wind speeds at least 64kts – 74mph). By Tuesday the storm had strengthened to super-typhoon status with 1-minute sustained winds of 140 kts (160 mph), equivalent to Category 5, then suddenly veered North off the coast of Taiwan before striking South Korea near Busan at category 2 intensity with 1-minute sustained winds near 85 kts (100 mph).

Tropical Storm Risk (TSR) is one of the leading organisations around the world providing accurate forecasts of hurricanes, tropical storms and cyclones. TSR storm alerts provide advanced warning of the locations likely to be affected, up to 5 days ahead. The TSR storm footprints offer unrivalled accuracy in identifying the likely wind strengths across affected areas, together with the timing of landfall and probabilities of damaging winds. Footprints are available in GIS formats allowing them to be automatically integrated into a client's risk management tools.



Nuclear Power Plant Locations in the Path of Typhoon Hinnamnor

TSR works with aid agencies, governments, energy, finance and marine organisations around the world helping them manage the real-time risks associated with live tropical storms. These forecast windfields allow operational and risk management to identify areas where critical infrastructure is threatened so they can assess what action needs to be taken to protect lives.

For more information about the TSR Critical Infrastructure Forecasts and Alerts please email Nick Wood, Commercial Director, EuroTempest at [nick.wood@eurotempest.com](mailto:nick.wood@eurotempest.com).