Tropical Cyclone Event Response

REAL-TIME, GLOBAL
HAZARD ANALYTICS FOR
TROPICAL CYCLONES

LIVE HAZARD INSIGHT

GLOBAL, REAL-TIME, PROBABILISTIC

Live Cat Modeling

Stochastic events conditioned by national agency reports and forecasts, generated on-the-fly every 12 hours

A Truly Global Solution

Consistent coverage of all TC affected regions of the world under one single framework

High-Resolution Probabilistic Hazard Layers

Query all our 1-km resolution gust footprints via online interactive webmap access, raw data download or API service

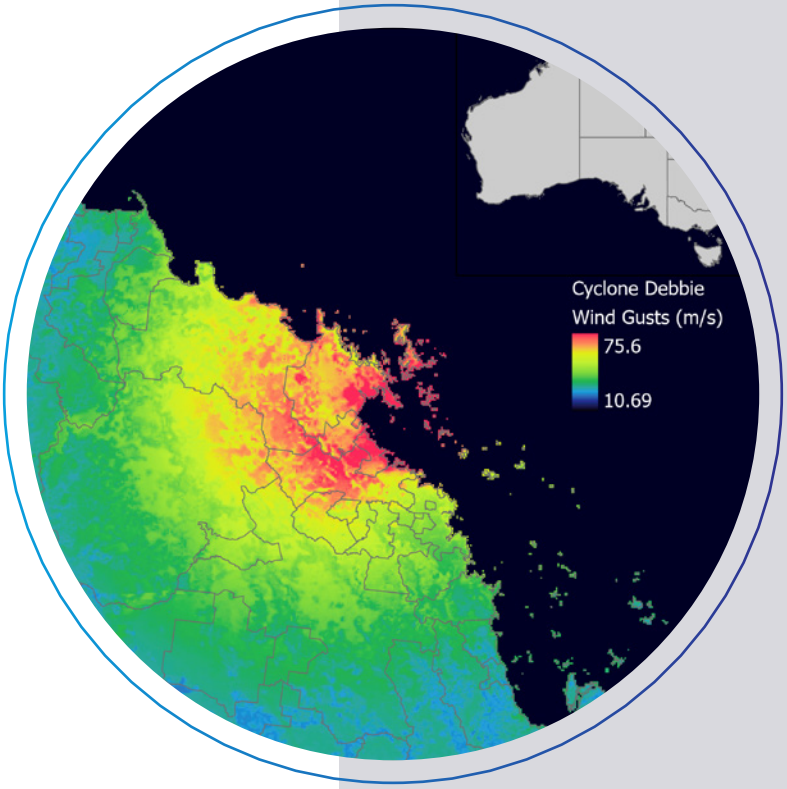
UNIQUE SERVICE FEATURES

1. Before, during and after landfall services
2. Probabilistic event footprints conditioned on available information
3. Proprietary machine learning wind modeling technology
4. 1-km resolution terrain corrected probabilistic gust layers with global coverage

FORECYC

PRE-LANDFALL PROBABILISTIC FORECASTING

In the days and hours before a TC landfall, uncertainty in the potential impact is high. To capture the distribution of risk ForeCyc creates 100 stochastic events every 12 hours (live cat modelling), conditioned on the latest information available. This unique approach blends operational weather forecasts and deterministic predictions with climatological knowledge of TC behaviour in a particular region. From generation of 1-km resolution gust footprints for each of the 100 members, ForeCyc summarizes the distribution of risk into probabilistic footprints providing wind gust metrics.



HINDCYC

POST-LANDFALL PROBABILISTIC HAZARD

In the hours following a TC landfall the risk distribution narrows as we gain knowledge of the likely location and intensity of the system from observation sources, yet other aspects of the risk remain highly uncertain. HindCyc is designed to sample modelled distributions of TC size and wind field shape as well as the likely location of peak winds, to provide a refined view of gust exceedance risk that is consistent with the ForeCyc methodology.

DEEPCYC

PHYSICALLY-REALISTIC EVENT RECONSTRUCTION

In the days following an event, detailed surface wind observation data become available. DeepCyc offers a deep-dive reconstruction of the event by minimizing model error at a network of selected gust observations. The result is a single best fit gust footprint that is consistent with both the physics of our model and the surface observation experience.

SEASONAL LICENCING OPTIONS

1. Licence ForeCyc, HindCyc and DeepCyc separately or as a bundle
2. All TC affected regions of the world covered
3. Range of data delivery options (interactive webmap, API, download)

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