

Evaluating convective-scale simulations of tropical cyclones in South East Asia

Chris Short and Jon Petch (United Kingdom Met Office)

In this presentation we will evaluate the performance of Met Office global and convective-scale NWP models for predicting tropical cyclones, based on over a year of operational forecasts for South East Asia.

Compared to the Met Office global model, the convective-scale model provides much improved predictions for the intensities of strong storms (category 3 and above), but tends to over-intensify weaker storms. It also successfully captures rapid intensification (RI) events, albeit with too many false alarms, whereas the global model cannot predict RI at all. Track errors are similar in the two models, but the spatial location of rainfall within intense TCs is more skilfully predicted by the convective-scale model, and the statistical distribution of rain-rates is closer to that observed. However, the mean rain-rate in TC cores is too high, and the rain-rate distribution is more skewed towards high rain-rates than observed.