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## Verification of probabilistic severe weather forecasts over the UK from MOGREPS and ECMWF

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Verifying the effectiveness of impact-based weather warnings objectively is still very difficult due to the lack of suitable impact observations. Here we verify first guess warnings based on proxy high-impact forecast thresholds which can typically cause some level of disruption. Probabilistic forecasts of severe wind gusts and heavy rainfall over the UK from the Met Office ensemble prediction system first-guess warnings (EPS-W) tool have been verified. This tool post-processes forecasts from a two main ensemble systems - the Met Office Global and Regional Ensemble Prediction System (MOGREPS) and the European Centre for Medium-Range Weather Forecasts (ECMWF). The post-processing takes advantage of three versions of MOGREPS, including a new 2.2km resolution convection-permitting ensemble over the UK (known as MOGREPS-UK), as well as courser resolution regional and global versions (known as MOGREPS-R and MOGREPS-G respectively). Verifying severe weather forecasts can be problematic due to the low number of samples, making it difficult to produce a conclusive set of results. Therefore, a range of forecast thresholds have been verified; from those which may only cause minor impacts, to those which have the potential to cause moderate impacts. The lower thresholds in particular provide a useful number of samples, with the higher thresholds providing an insight into how the forecast system might perform at this level.