



Met Office Global Hazard Map – a prototype GIS Web Map Service for forecasting high-impact weather across the globe for the week ahead

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The Global Hazard Map is a new prototype product that aims to summarise the risk of high-impact weather across the globe over the coming week, currently using ensemble forecasts from MOGREPS-15 and the ECMWF EPS. It is a GIS Web Map Service (WMS) and allows the user to select layers of forecast data up to 7 days ahead. At present forecast layers are available for tropical cyclones, precipitation, and wind gust. For precipitation/wind gust it currently displays the probability of the 24hr precipitation accumulation/maximum wind gust forecast from the ECMWF EPS exceeding the 99th percentile of the ECMWF EPS forecast climatology. For tropical cyclones the multi-model strike probability is displayed and includes both existing storms and those forecast to form during the forecast. Geoprocessing is used to create an “at-a-glance” symbol-based summary map summarising the week ahead, and there is an additional option to underlay population density.

The initial research prototype map will be refined based on user needs and feedback. Additional forecast types, such as extremes of temperature and severe convection diagnostics, will be added, along with further multi-model inputs. There is also potential to add recent geohazards such as volcanic eruptions or earthquakes, and additional layers containing vulnerability and exposure information, in order to aid the user, currently Met Office forecasters, in identifying those areas where the greatest impacts are likely to occur.