

Introducing the Met Office 2.2-km Europe-wide convection-permitting regional climate simulations

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The Met Office is currently conducting Europe-wide 2.2-km convection-permitting model (CPM) simulations driven by ERA-Interim reanalysis and present/future-climate GCM simulations. Here, we present the preliminary results of these new European simulations examining daily and sub-daily precipitation outputs in comparison with observations across Europe, 12-km European and 1.5-km UK climate model simulations. As the simulations are not yet complete, we focus on diagnostics that are relatively robust with a limited amount of data; for instance, the diurnal cycle and the probability distribution of daily and sub-daily precipitation intensities. We will also present specific case studies that showcase the benefits of using continental-scale CPM simulations over previously-available small-domain CPM simulations.