Supplemental Material: From Single Storms to Global Waves: A Global 2.5 km ICON Simulation of Weather and Climate

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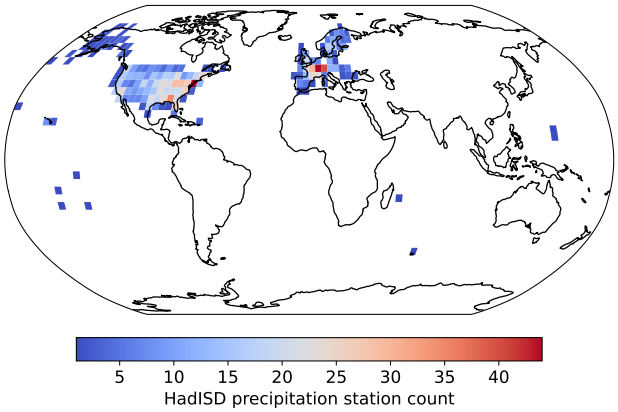

Figure S1. Station density of HadISD precipitation stations that have at least 50 % data coverage during the simulation period in 4 4 areas. White areas denote no station coverage.

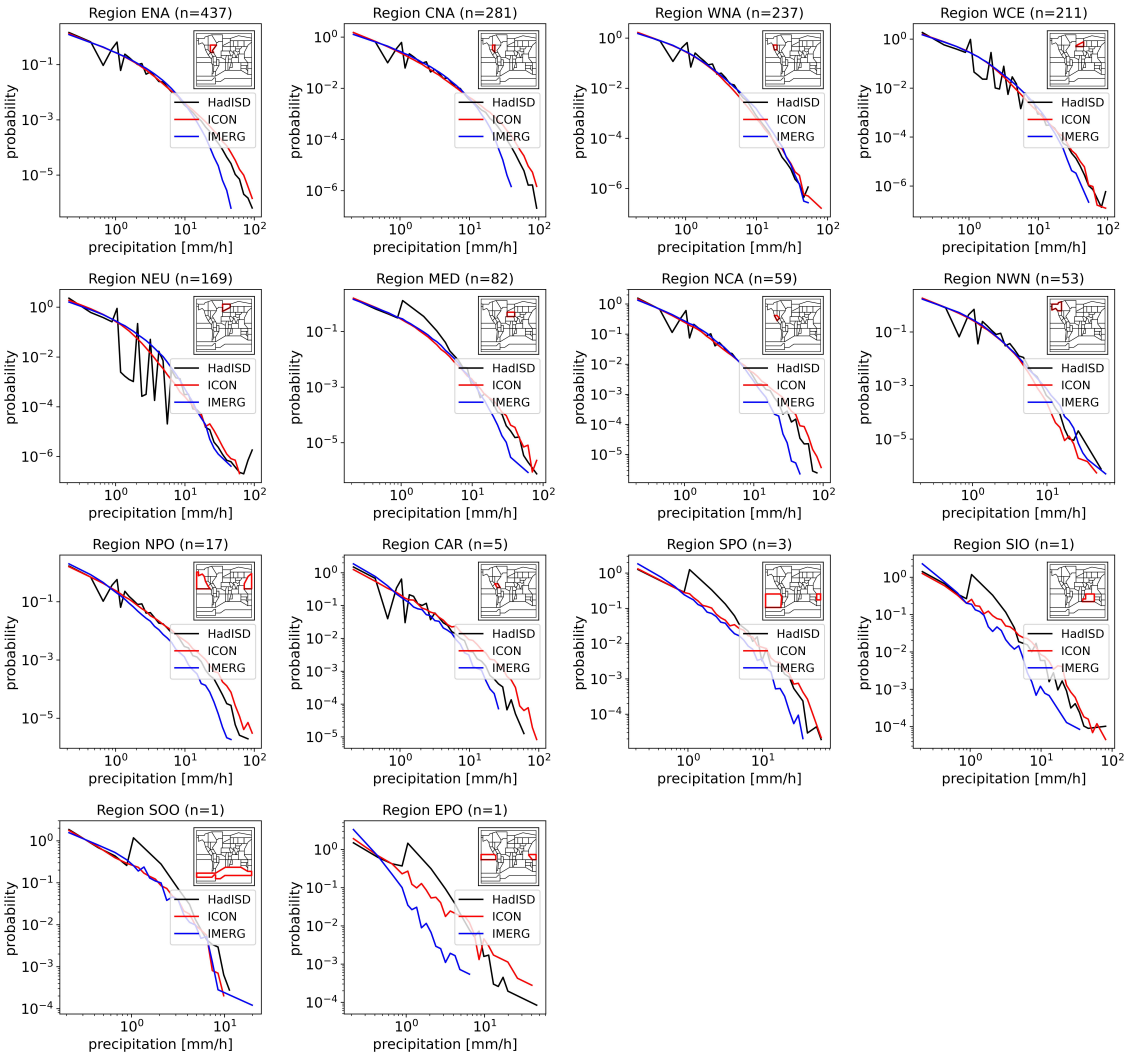

Figure S2. Probability density functions (PDFs) for hourly precipitation comparing ICON (red) and IMERG (blue) against HadISD station observations (black). Shown are Eastern North America (ENA), Central North America (CNA), Western North America (WNA), Western Central Europe (WCE), Northern Europe (NEU), Mediterranean (MED), Northern Central America (NCA), Northwestern North America (NWN), Northern Pacific Ocean (NPO), Caribbean (CAR), South Pacific Ocean (SPO), South Indian Ocean (SIO), Southern Ocean (SOO), and Eastern Pacific Ocean (EPO) from the top left to the bottom right. The locations of these regions are shown in the inlet maps. The underlying station density in the HadISD dataset is shown in Fig. S1 and the number of station (n) in each region is shown in the panel header.

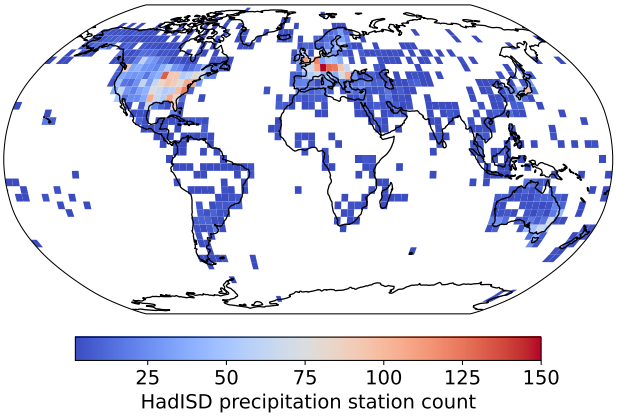

Figure S3. Station density of HadISD 10 m wind stations that have at least 50 % data coverage during the simulation period in 4 4 areas. White areas have no station coverage.