Extreme Events Representation in CMCC-CM2 High and Very-High Resolution General Circulation Models

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Supplemental material

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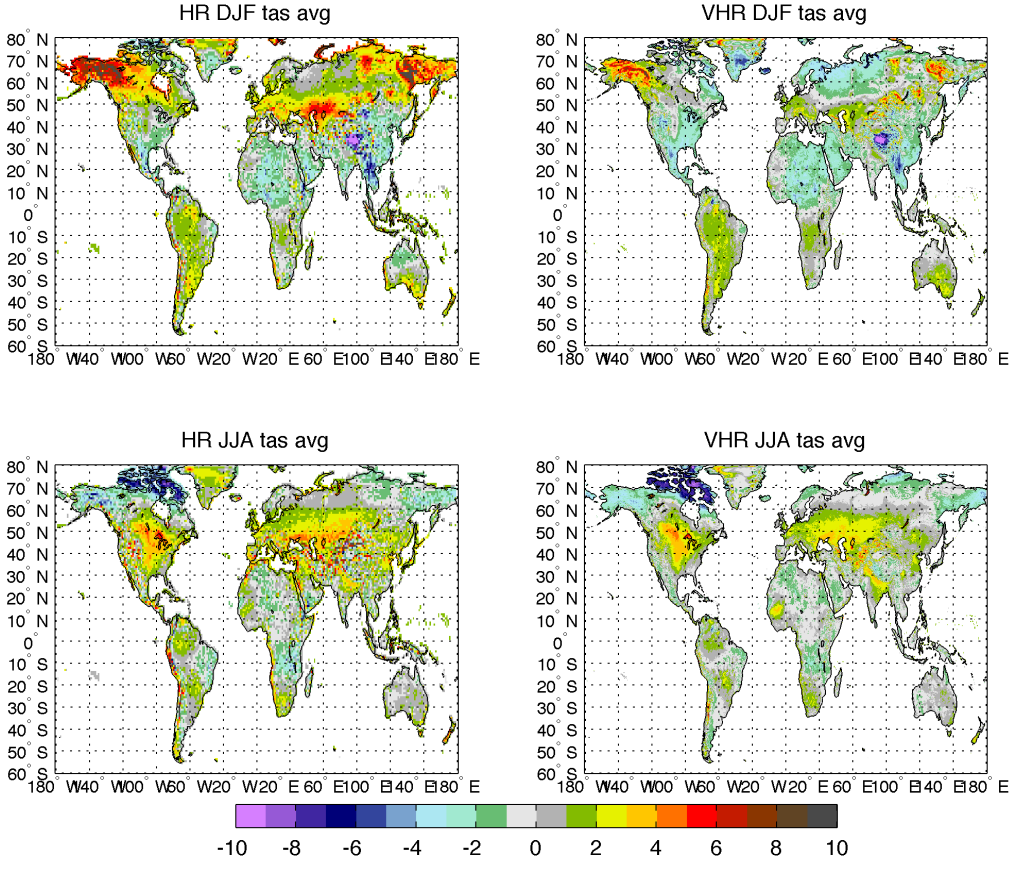

Figure S1. Averaged Temperature bias. Left/Right panels show HR/VHR model bias compared to ERA5. Upper/Lower panel shows boreal winter (DJF)/summer (JJA) results. Units are [ºC].

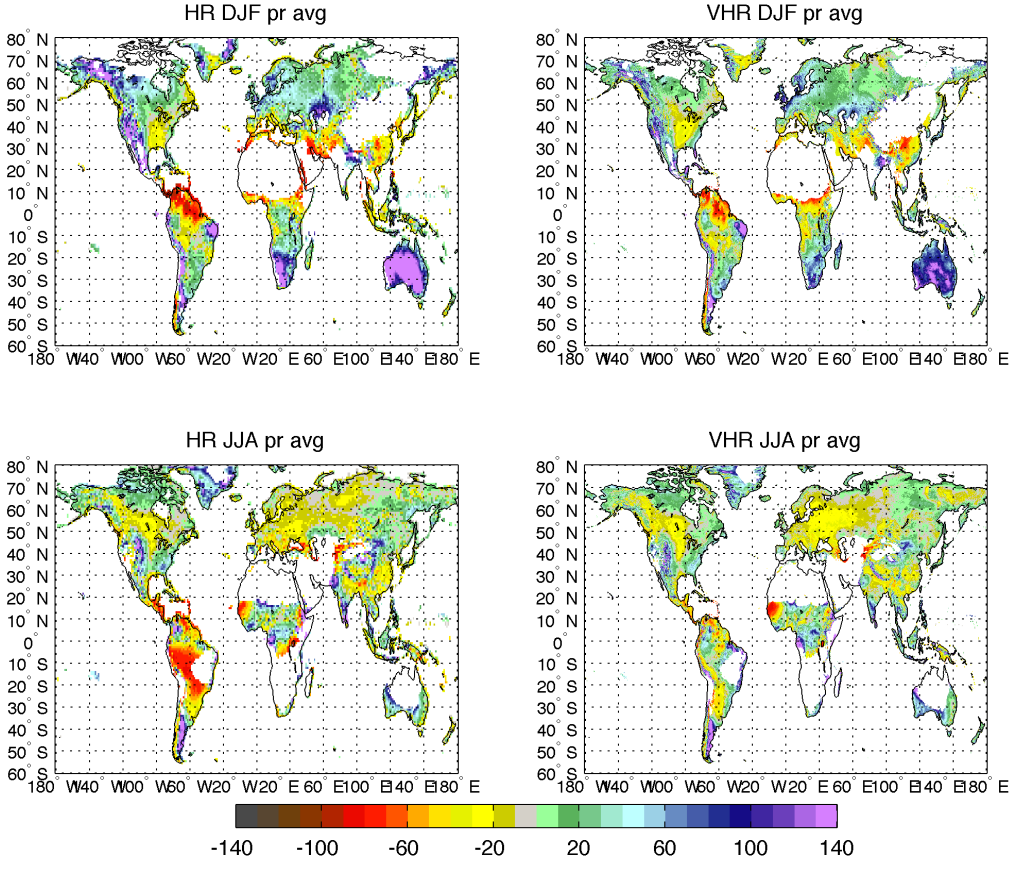

Figure S2. Averaged Precipitation bias. Left/Right panels show HR/VHR model bias compared to ERA5. Upper/Lower panel shows boreal winter (DJF)/summer (JJA) results. Units are [%]. White areas over land represent regions where the seasonal average precipitation is lower than 0.5 mm/d in ERA5.

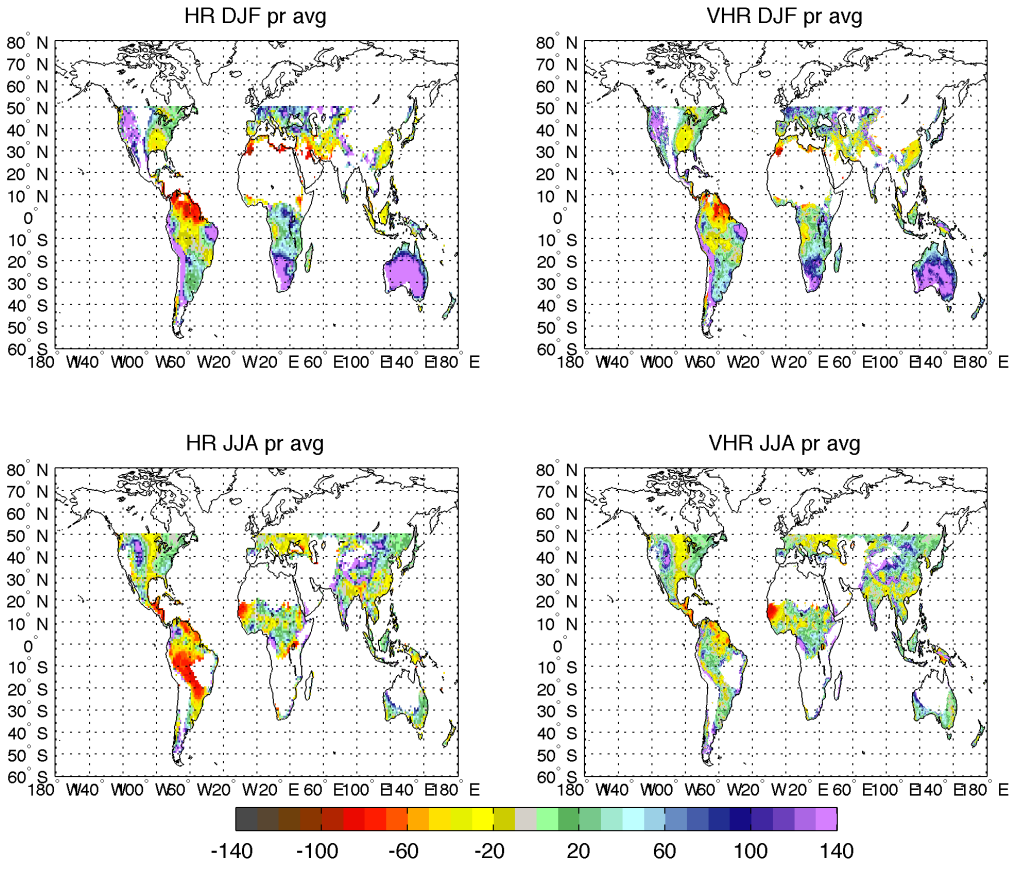

Figure S3. Same as Figure S2 but compared to CHIRPS observations instead of ERA5. Averaged Precipitation bias. Left/Right panel shows HR/VHR model bias compared to CHIRPS. Upper/Lower panel shows boreal winter (DJF)/summer (JJA) results. Units are [%]. White areas over land represent regions where the seasonal average precipitation is lower than 0.5 mm/d in CHIRPS. Precipitation poleward than +-50 degrees is not available in CHIRPS data set.

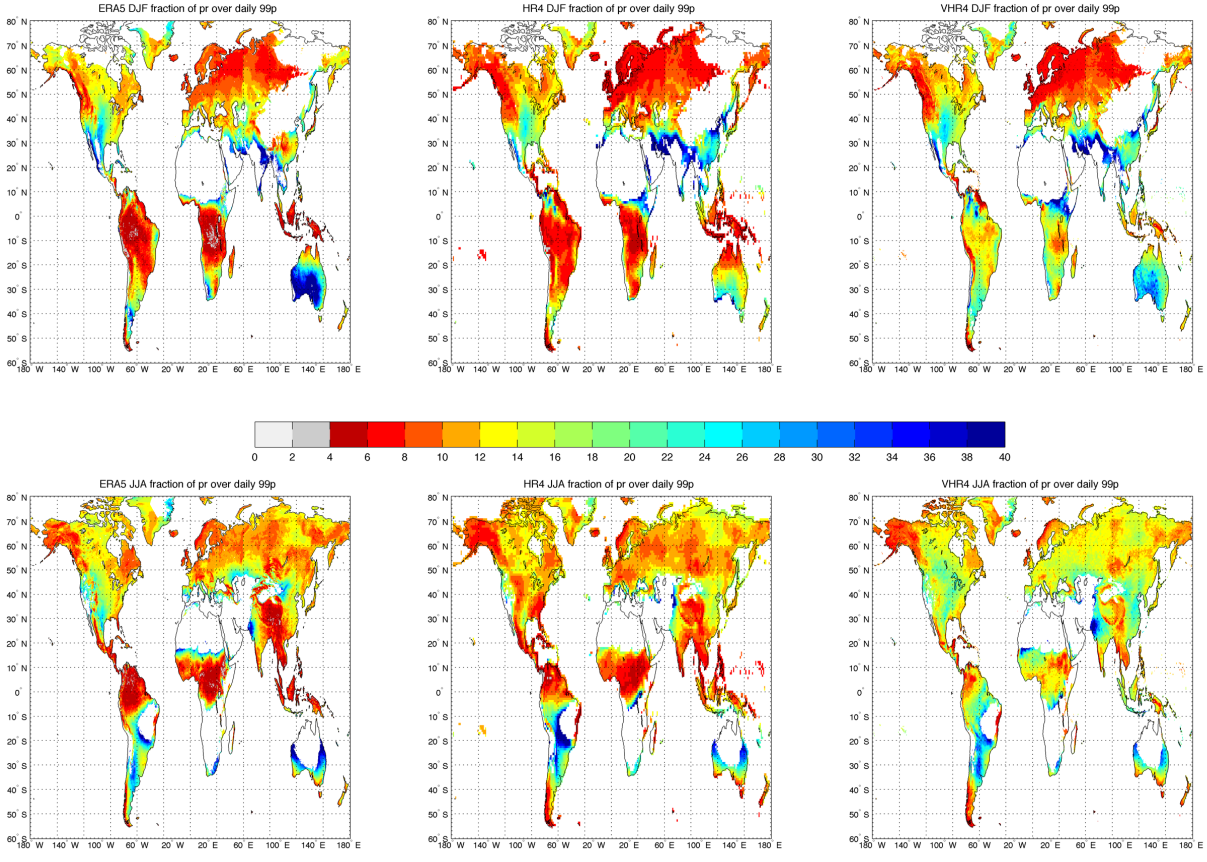

Figure S4. Fraction of precipitation associated with extreme events (higher or equal to the 99th percentile) with respect to the total precipitation. Left/Central/Right panel shows ERA5/HR/VHR results. Upper/Lower panel shows boreal winter (DJF)/summer (JJA) results. Units are [%]. White areas over land represent regions where the seasonal average precipitation is lower than 0.5 mm/d.