

Figure 1: Time series of the 5th, 50th, and 95th percentile values of mean annual temperature (K) as emulated by RIME-X for the SSP3-7.0 scenario, compared to the corresponding empirical percentiles derived from ISIMIP simulations. The figure shows results for 15 selected regions: the three regions with the lowest, median, and highest normalized mean absolute error, as well as three regions each around the 5th and 95th percentiles of the error distribution.

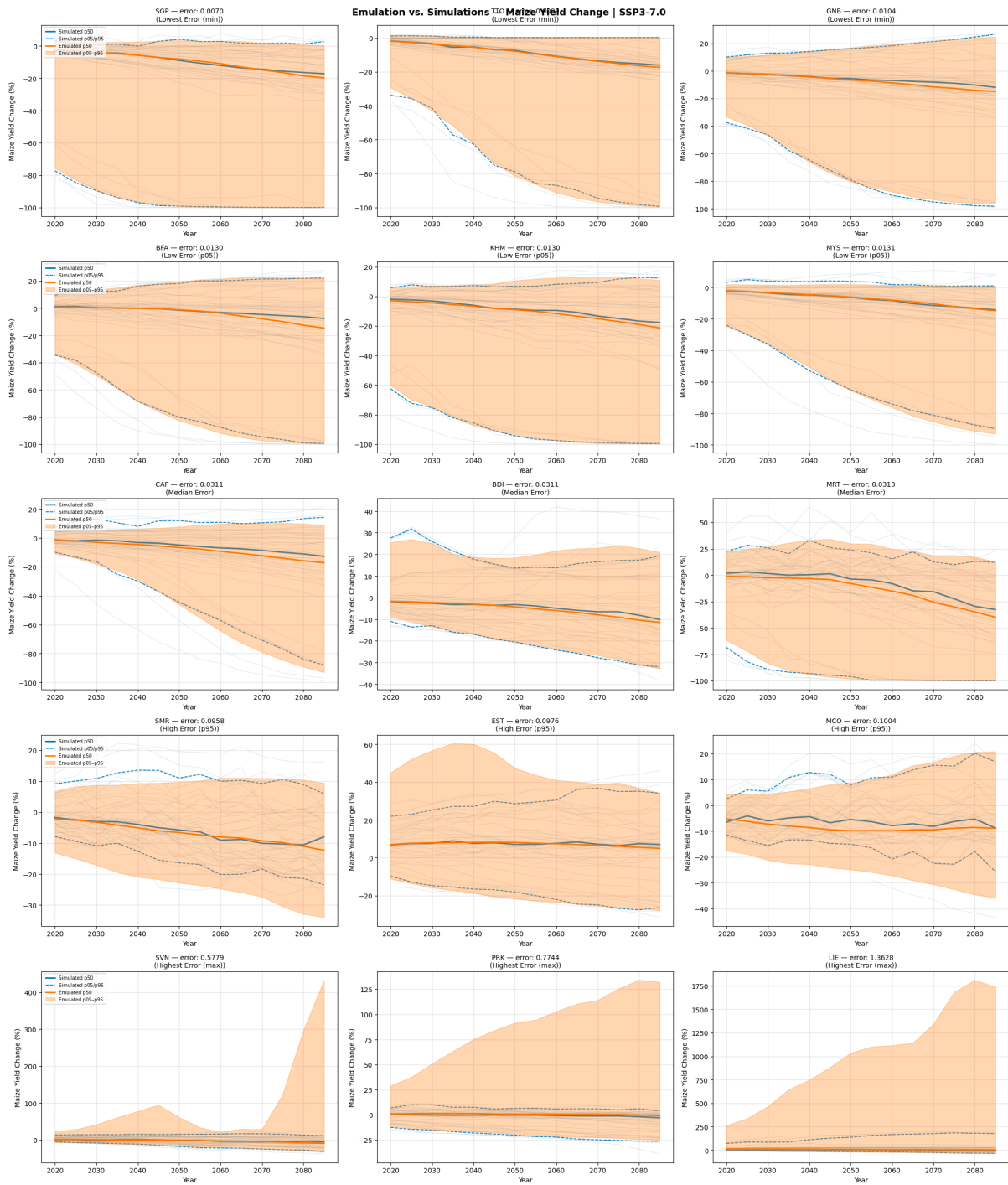


Figure 2: Time series of the 5th, 50th, and 95th percentile values of maize yield change (%) as emulated by RIME-X for the SSP3-7.0 scenario, compared to the corresponding empirical percentiles derived from ISIMIP simulations. The figure shows results for 15 selected regions: the three regions with the lowest, median, and highest normalized mean absolute error, as well as three regions each around the 5th and 95th percentiles of the error distribution. The particularly large maximum errors in the 95th percentile of this indicator can be traced to the impact model *DSSAT-Pythia*, which does not provide outputs for SSP3-7.0 but exhibits comparatively large values under SSP5-8.5. As a result, these values are included in the RIME-X-derived distributions but are absent

from the corresponding “ground truth” SSP3-7.0 simulations, leading to inflated errors in the upper quantiles.

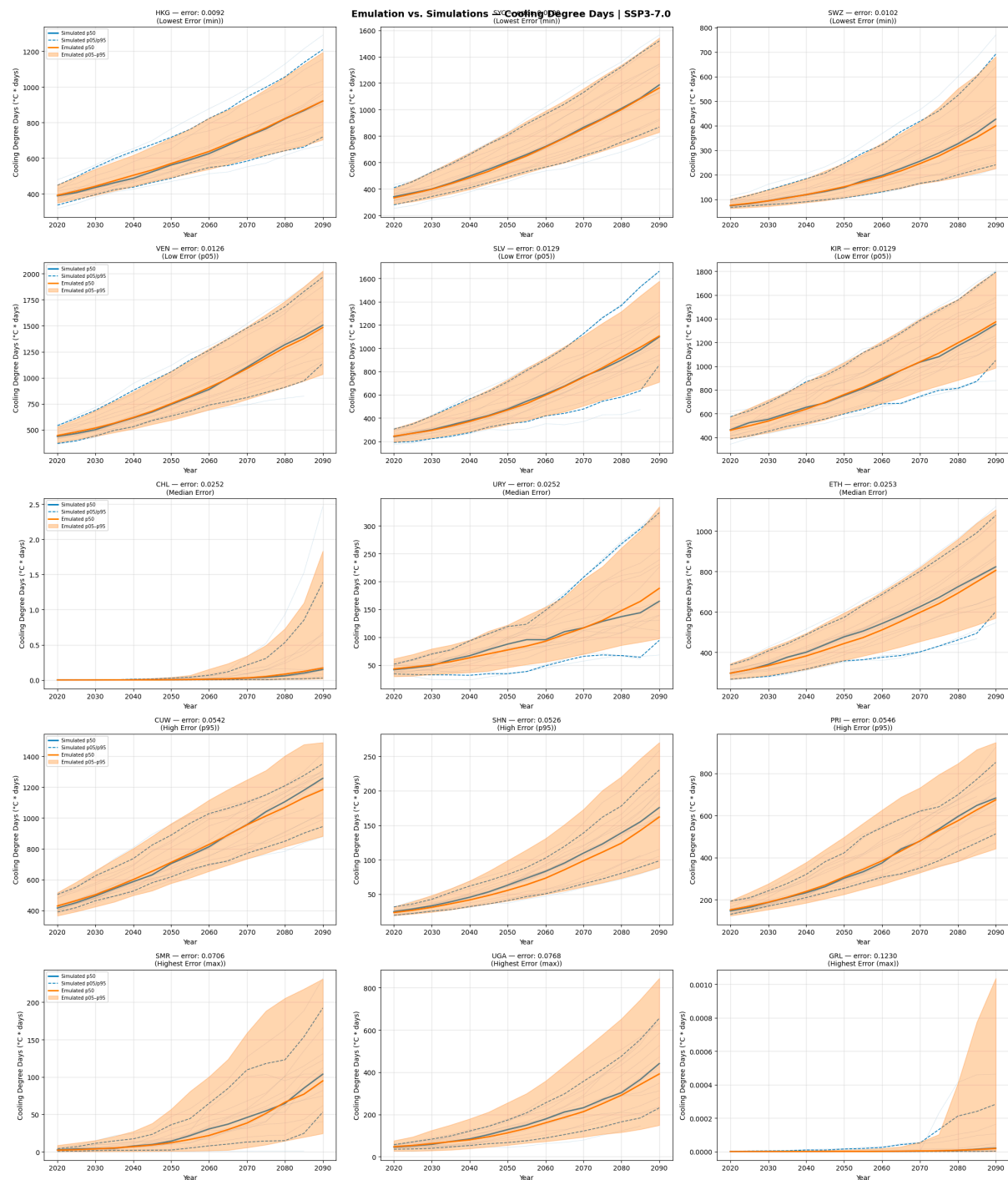


Figure 3: Time series of the 5th, 50th, and 95th percentile values of cooling degree days (°C * days) as emulated by RIME-X for the SSP3-7.0 scenario, compared to the corresponding empirical percentiles derived from ISIMIP simulations. The figure shows results for 15 selected regions: the three regions with the lowest, median, and highest normalized mean absolute error, as well as three regions each around the 5th and 95th percentiles of the error distribution.

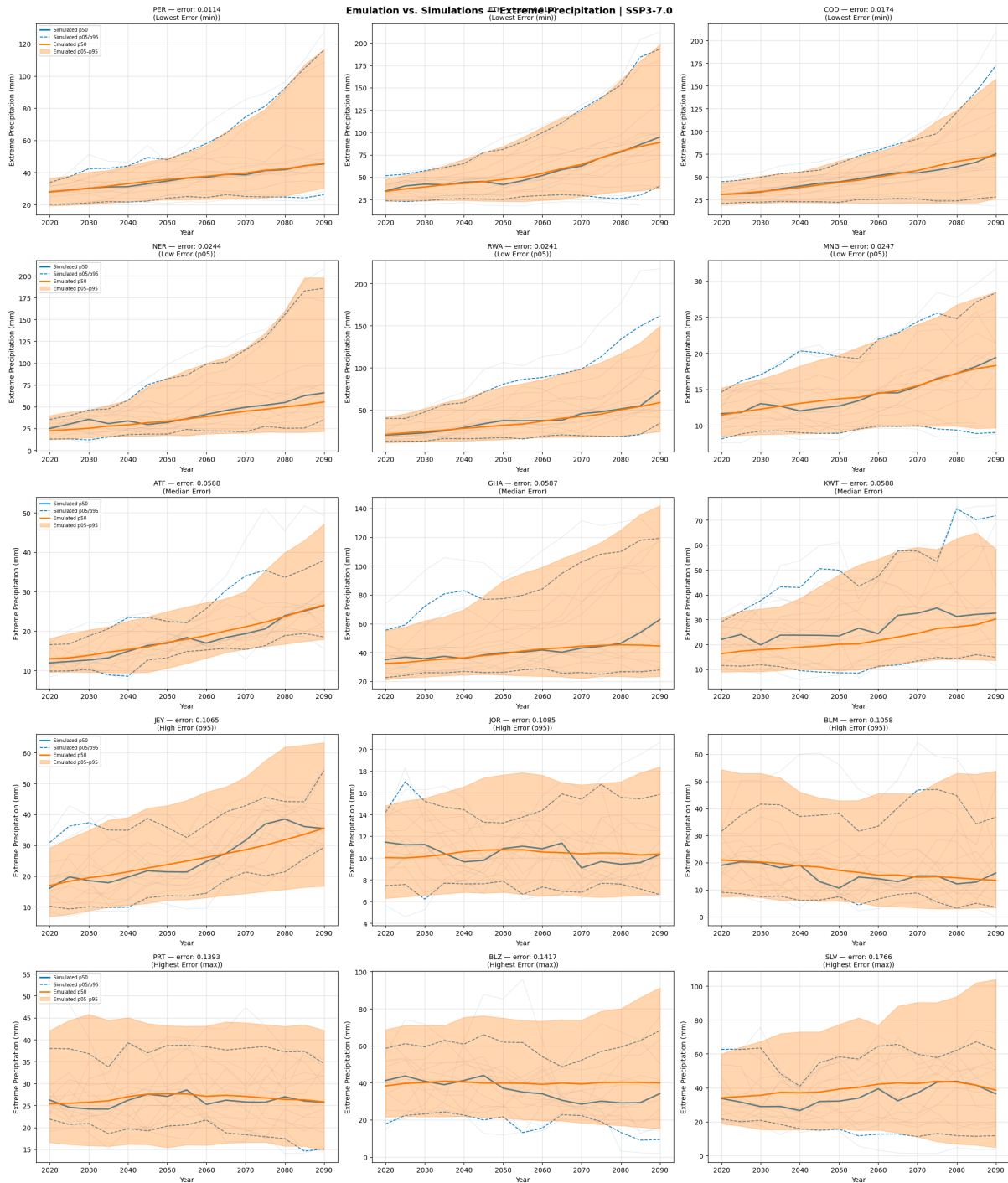


Figure 4: Time series of the 5th, 50th, and 95th percentile values of extreme precipitation (mm) as emulated by RIME-X for the SSP3-7.0 scenario, compared to the corresponding empirical percentiles derived from ISIMIP simulations. The figure shows results for 15 selected regions: the three regions with the lowest, median, and highest normalized mean absolute error, as well as three regions each around the 5th and 95th percentiles of the error distribution.

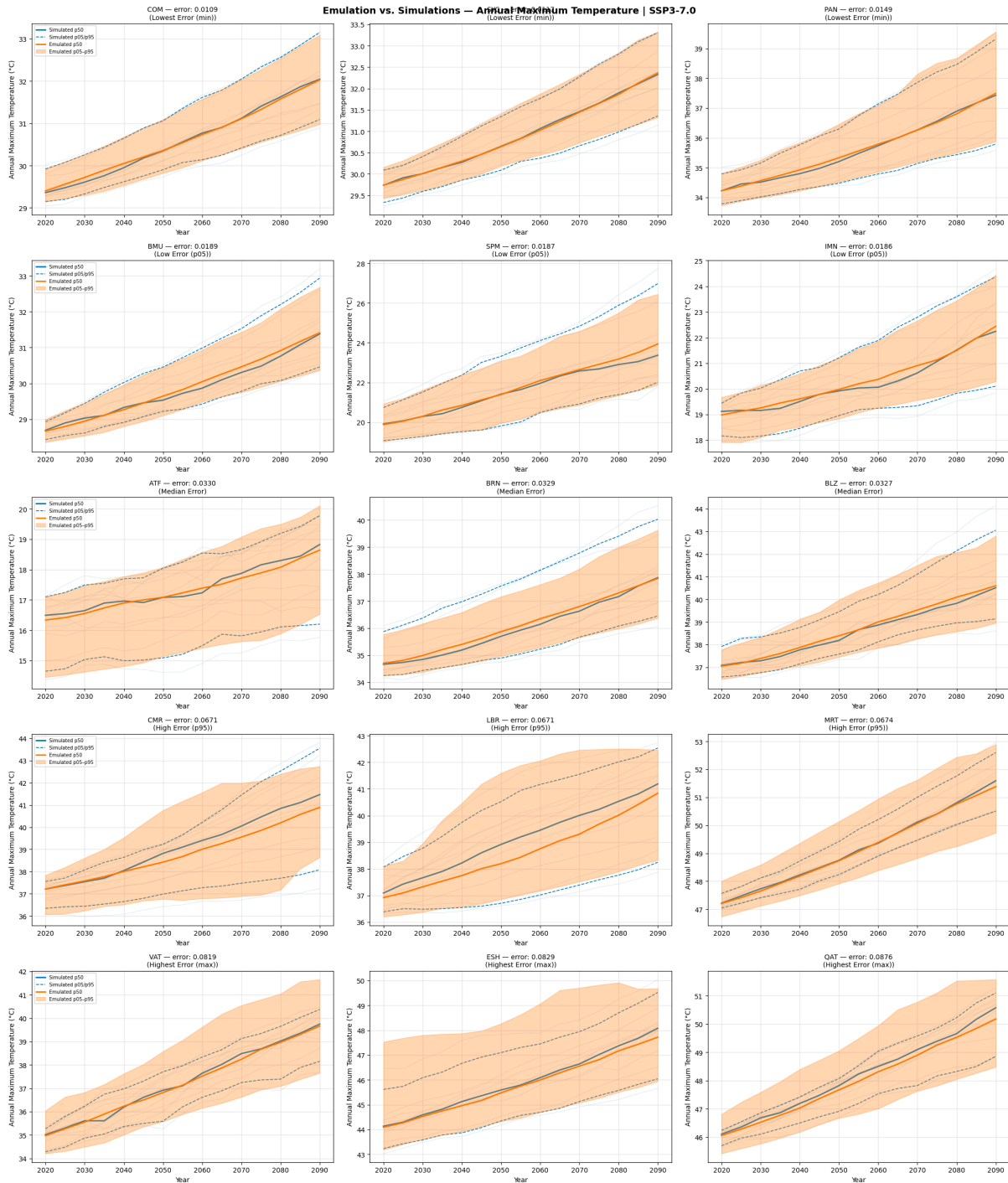


Figure 5: Time series of the 5th, 50th, and 95th percentile values of annual maximum temperature (°C) as emulated by RIME-X for the SSP3-7.0 scenario, compared to the corresponding empirical percentiles derived from ISIMIP simulations. The figure shows results for 15 selected regions: the three regions with the lowest, median, and highest normalized mean absolute error, as well as three regions each around the 5th and 95th percentiles of the error distribution.

