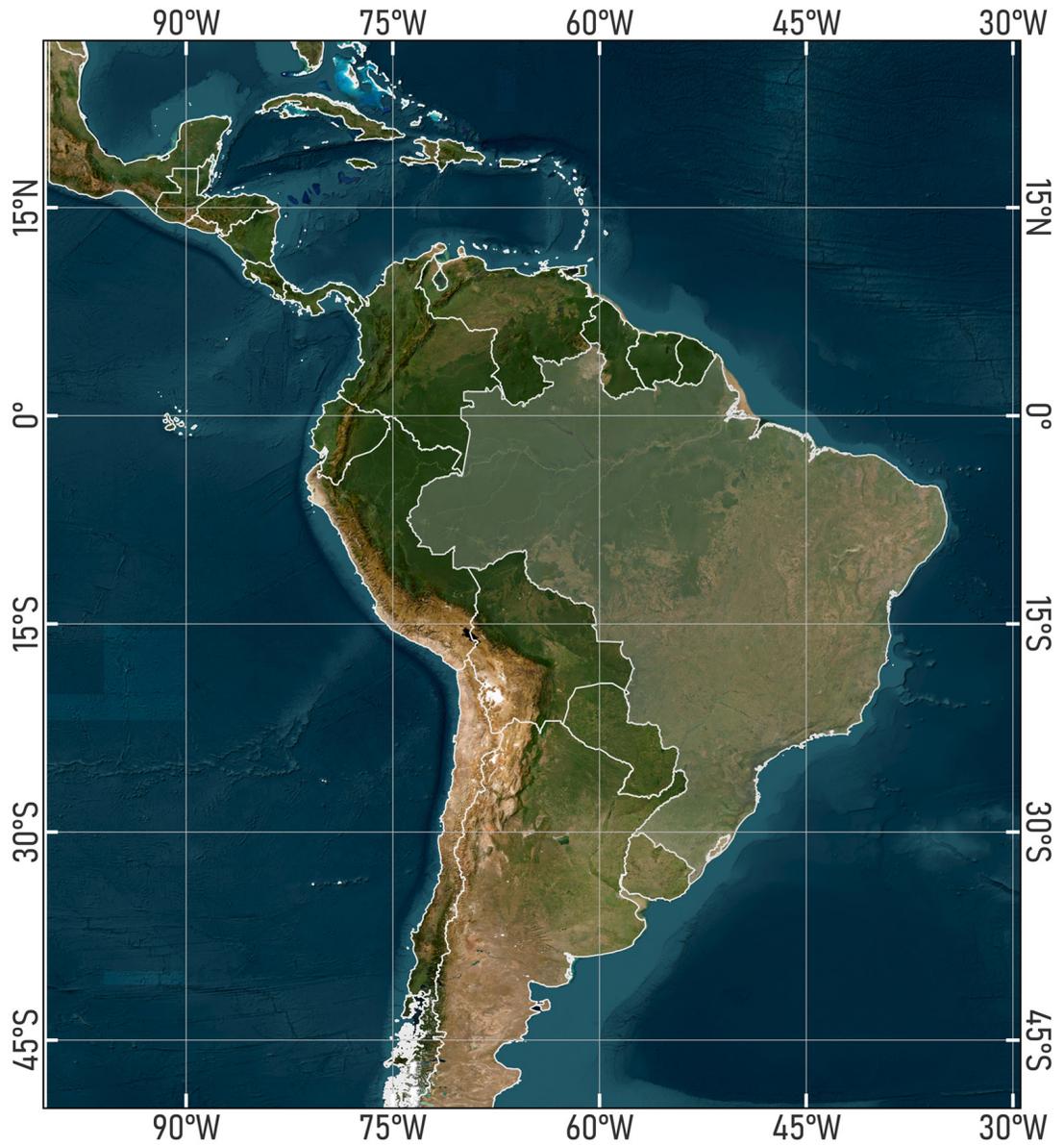
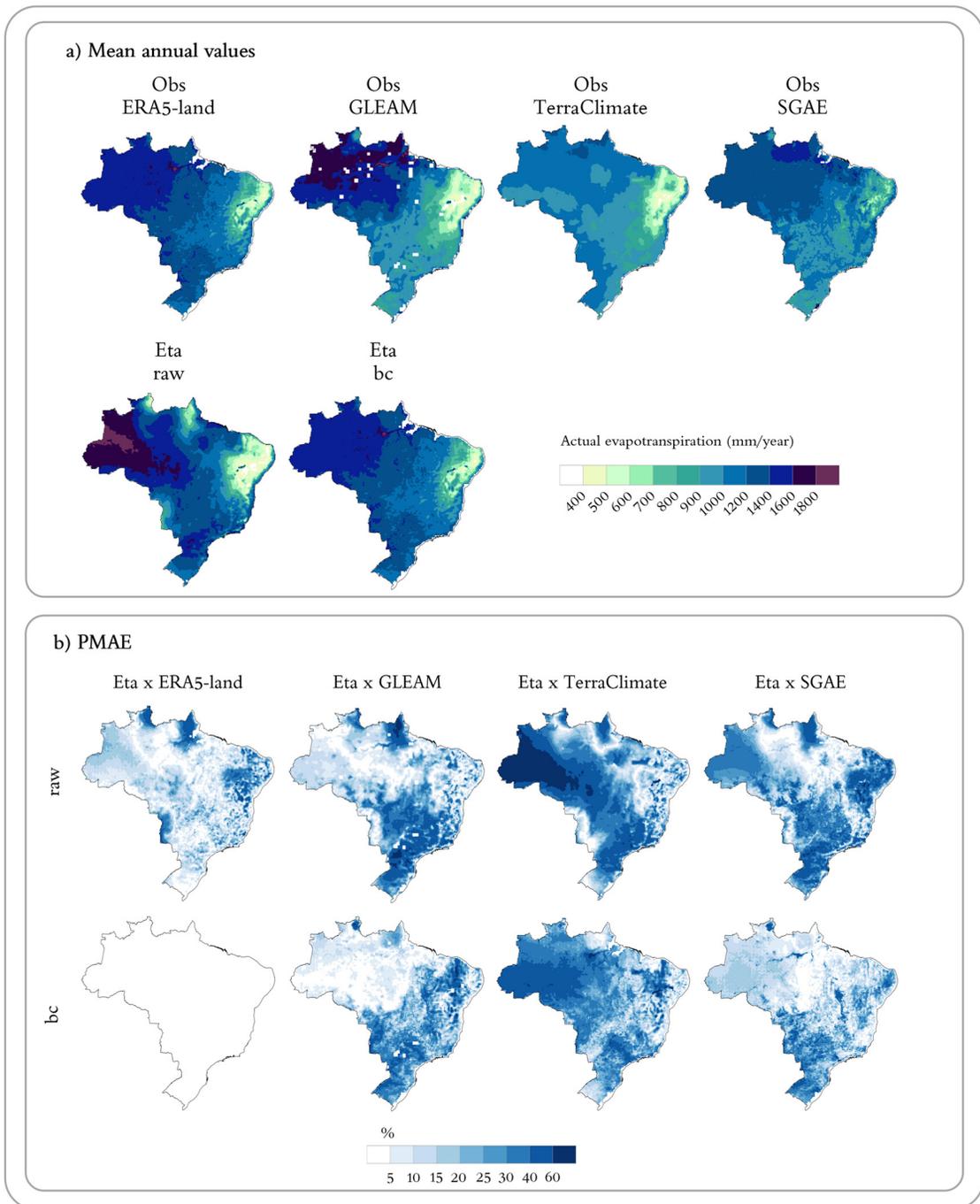


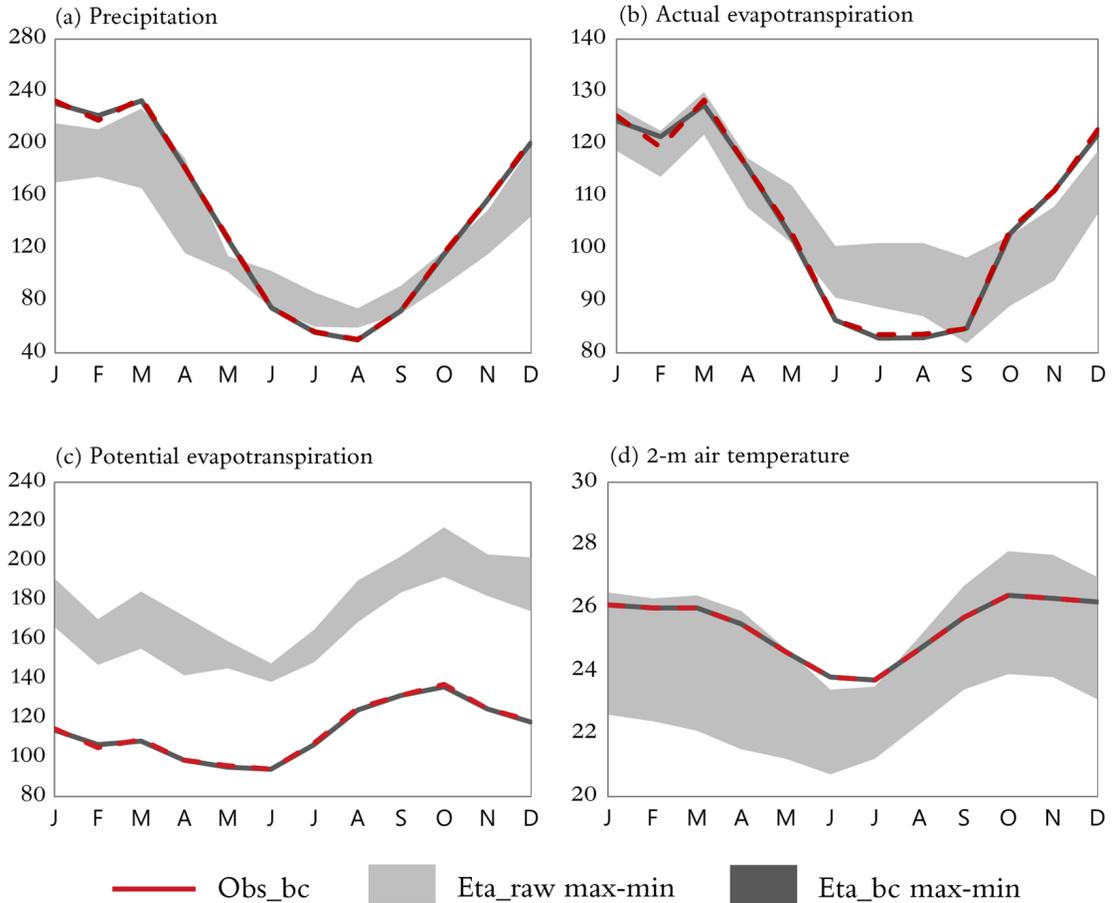
Tavares et al. 2024. A dataset of high-resolution climate change projections over South America with bias correction. *Derbyana*, 45: e821 (Supplementary material).



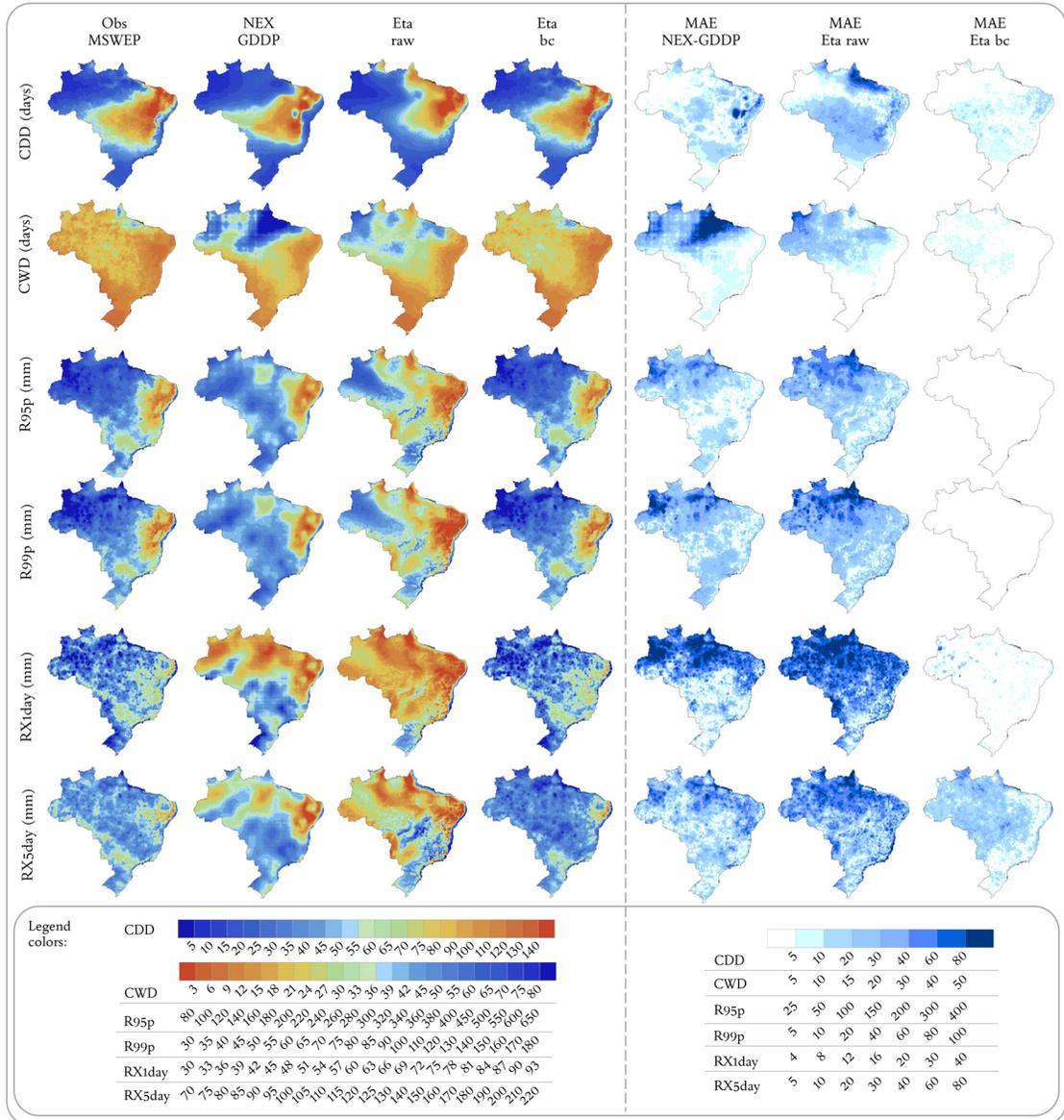
S1. The continental domain of the Eta runs to which the bias correction was applied.



S2. a) Annual real evapotranspiration (mm/year) and b) percentage of the mean absolute error (PMAE) of the Eta model simulations without (raw) and with bias adjustment (bc) considering the period 1976-2005. In addition to the Eta simulations, the annual mean values of the following observational bases/atmospheric reanalysis are also presented: ERA5-land (MUNOZ-SABATER *et al.* 2021), GLEAM (Global Land Evaporation Amsterdam Model; MIRALLES *et al.* 2011, MARTENS *et al.* 2017), TerraClimate (ABATZOGLOU *et al.* 2018) and SGAE (Synthesis of Global Actual Evapotranspiration; ELNASHAR *et al.* 2021). The ERA5-land reanalysis was used for model fitting. Mean annual observational values calculated considering similar periods of 30 years are 1981-2010 for the ERA5-Land, 1980-2009 for the GLEAM, 1976-2005 for the TerraClimate, and 1982-2011 for the SGAE dataset.



S3. Annual cycle of (a) Precipitation (mm/month), (b) Actual Evapotranspiration (mm/month), (c) Potential evapotranspiration (mm/month), and (d) 2-m temperature (°C). Dashed red curves refer to the monthly mean of the observations for validation, the light gray plumes refer to the confidence intervals (maximum and minimum values) of the raw Eta dataset and the dark gray plumes refer to the confidence intervals of the simulations after bias correction. Mean values are taken over the Brazilian territory.



S4. Indices of the annual precipitation extremes averaged over the baseline period, from left to right: the observational MSWEP dataset (first column), simulated by the NEX-GDDP datasets (NASA Earth Exchange Global Daily Downscaled Projections; second column) and simulated by the Eta model raw dataset (third column) and Eta simulations bias corrected dataset (fourth column). The three columns on the rightmost are the mean absolute error (MAE) of the NEX-GDDP dataset, Eta raw dataset, and bias-corrected dataset. The extreme indices are the consecutive dry days (CDD; days; first line), consecutive wet days (CWD; days; second line), the 95th percentile of daily precipitation or very wet day precipitation (R95p; mm; third line), the 99th percentile of daily precipitation or extremely wet day precipitation (R99p; mm; fourth line), maximum 1-day precipitation (RX1day; mm; fifth line) and maximum 5-day precipitation (RX5day; mm; sixth line).



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