Supplementary Material
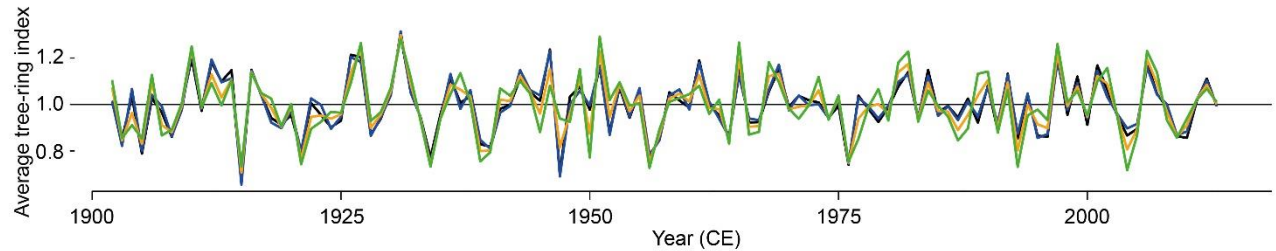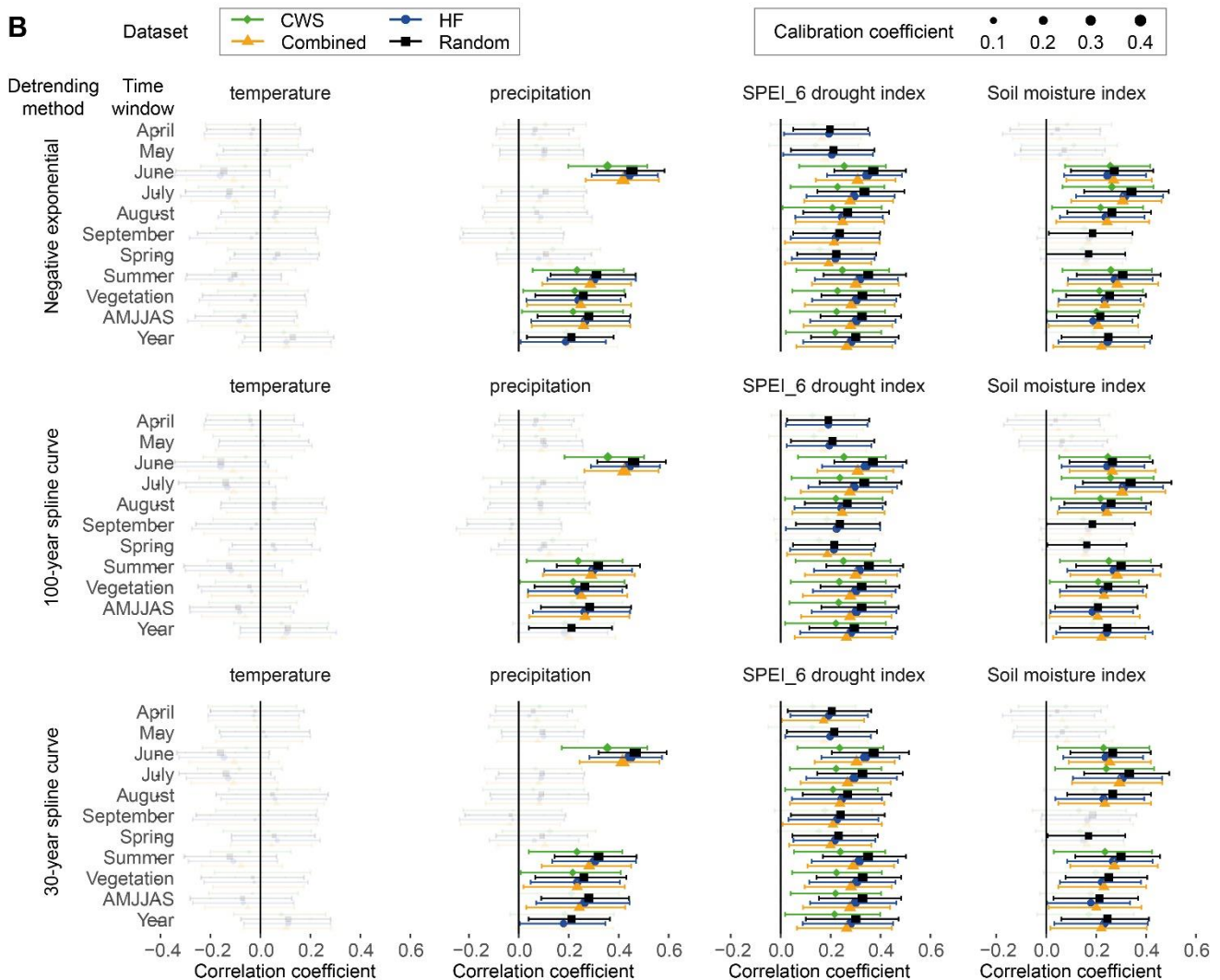
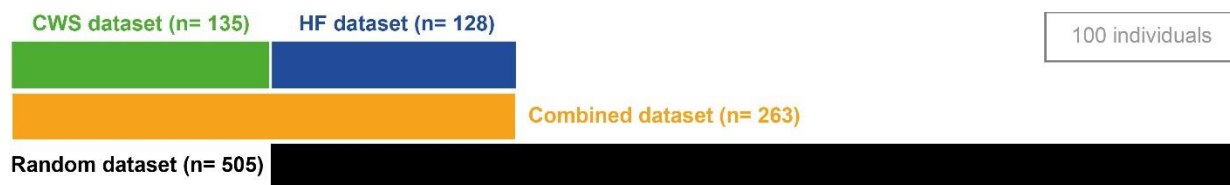## 1   Supplementary Figure 1

A

B

Supplementary Fig. 1: (A) Chronologies used in this study detrended with a a 30-year cubic spline after removing auto-correlation (AR). B Climate-growth correlations for the four

datasets used in this study with instrumental climate data for the period 1902-2013 from KNMI (http://climexp.knmi.nl). Correlations are shown for CWS (green), HF (blue), combined (orange) and random (black) datasets with different detrendings applied (after AR) and for different monthly, seasonal and annual time windows. Correlation quality is represented with different sized symbols for CWS (rhombs), HF (circles), combined (triangles) and random (squares) datasets. Semi-transparent lines indicate insignificant correlations.

2 Supplementary Figure 2

Supplementary Fig. 2: Number and distribution of samples for each dataset used in this study.