Supplementary materials

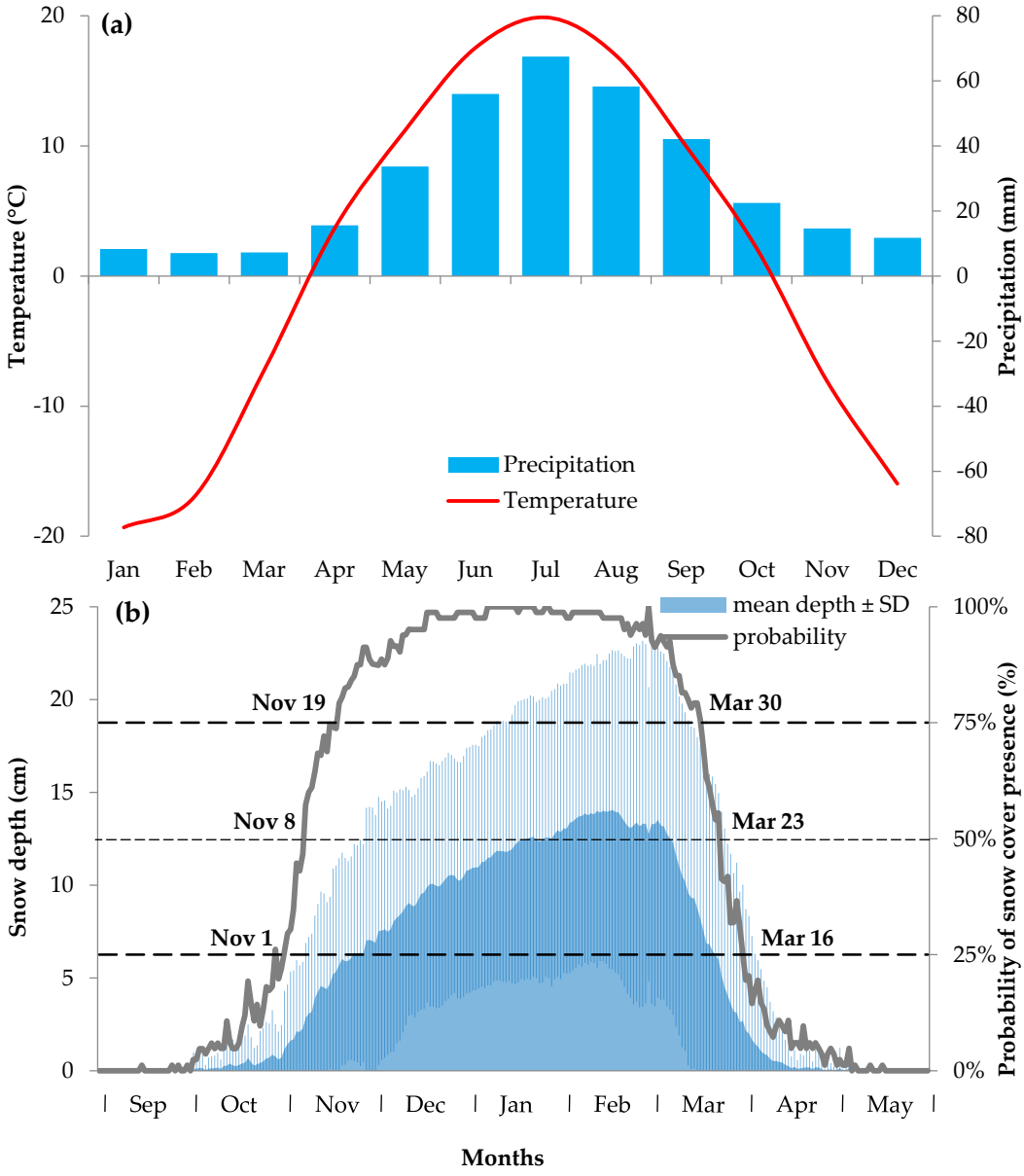


Figure S1. Climatic data of the study area: (**a**) mean monthly temperatures and precipitation, (**b**) daily seasonal dynamics of snow cover depth (*mean±SD*) and probability of snow presence; intersection of the three horizontal dotted lines with the probability line mark calendar dates of the first and last days when snow cover is present in 25%, 50%, and 75% of years, respectively. All climatic data were obtained from the Minusinsk station for 1936-2018.

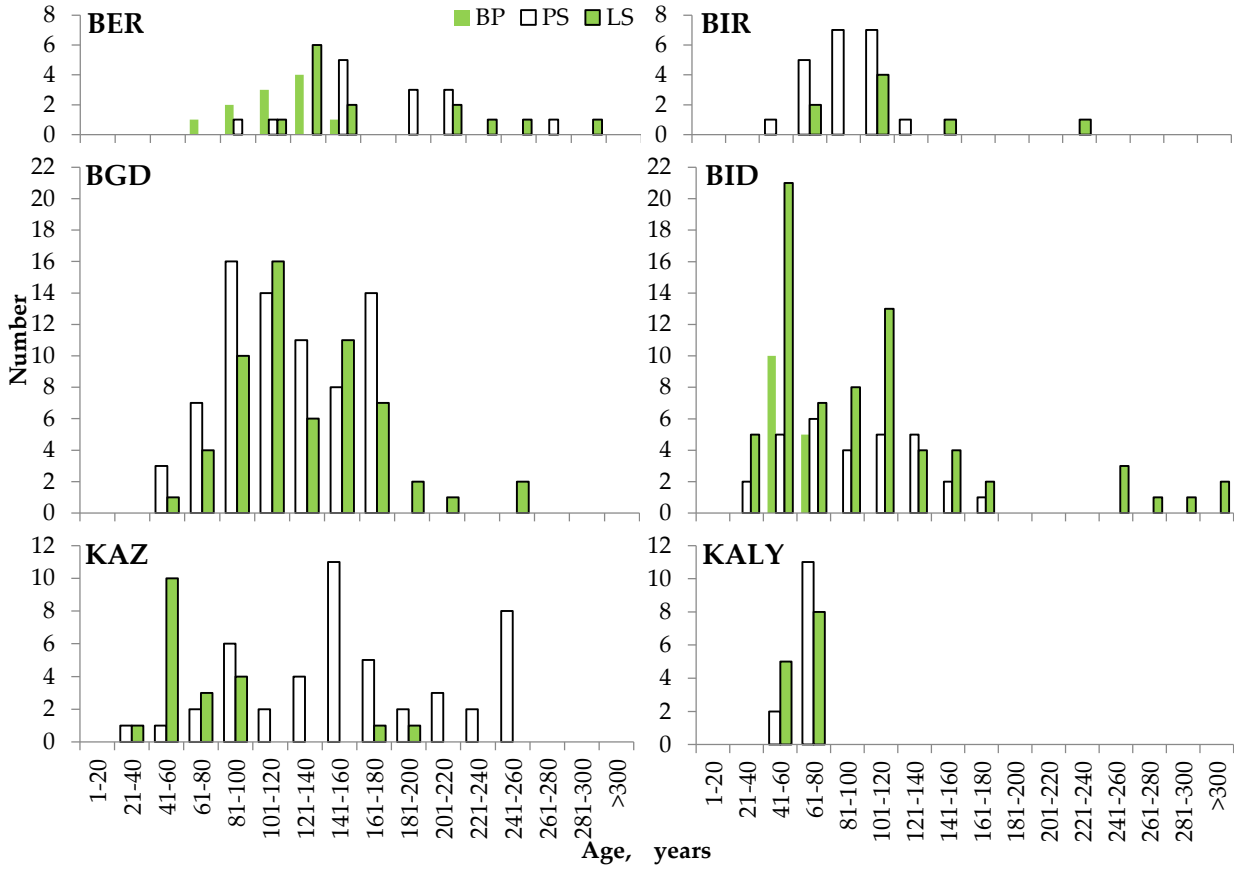


Figure S2. Age structure of six samples: distribution of sampled trees according to cambial age in 2020. BP – *Betula pendula* Roth., PS – *Pinus sylvestris* L., LS – *Larix sibirica* Ledeb.

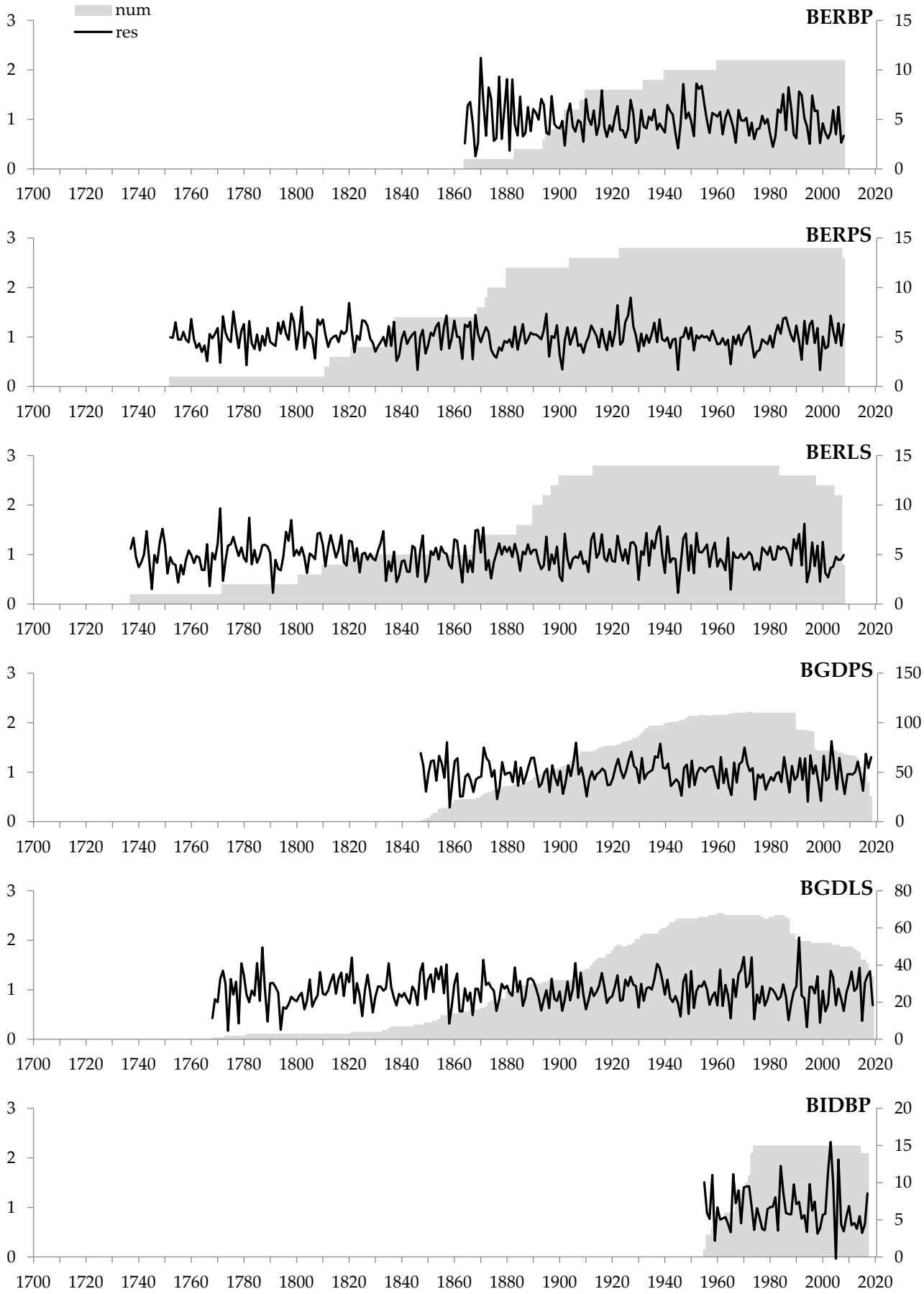


Figure S3. Residual tree-ring width chronologies (res; left ordinate) and the number of cores (num; right ordinate) in six sampling sites for *Betula pendula* Roth. (BP), *Pinus sylvestris* L. (PS), and *Larix sibirica* Ledeb. (LS).

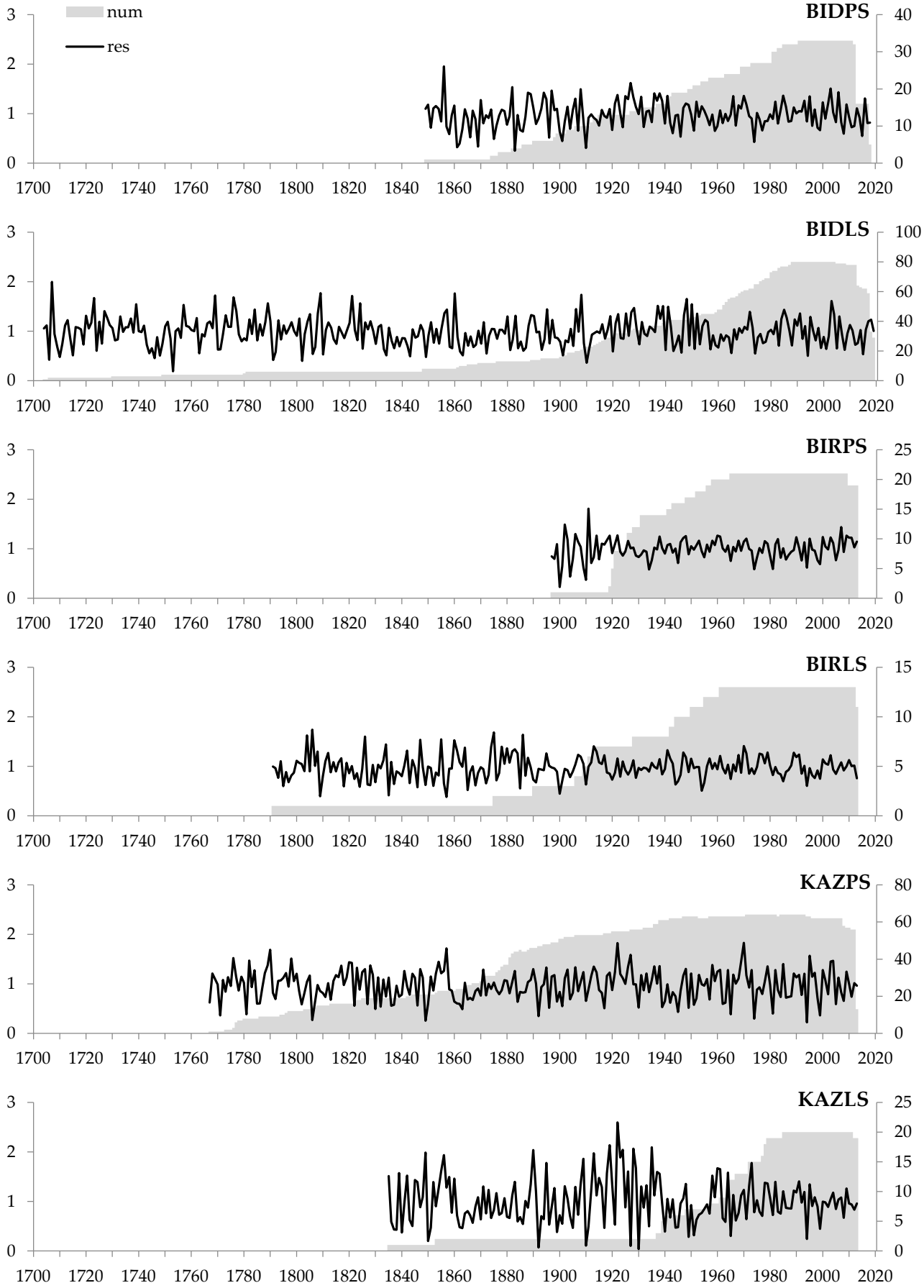


Figure S3. Continued.

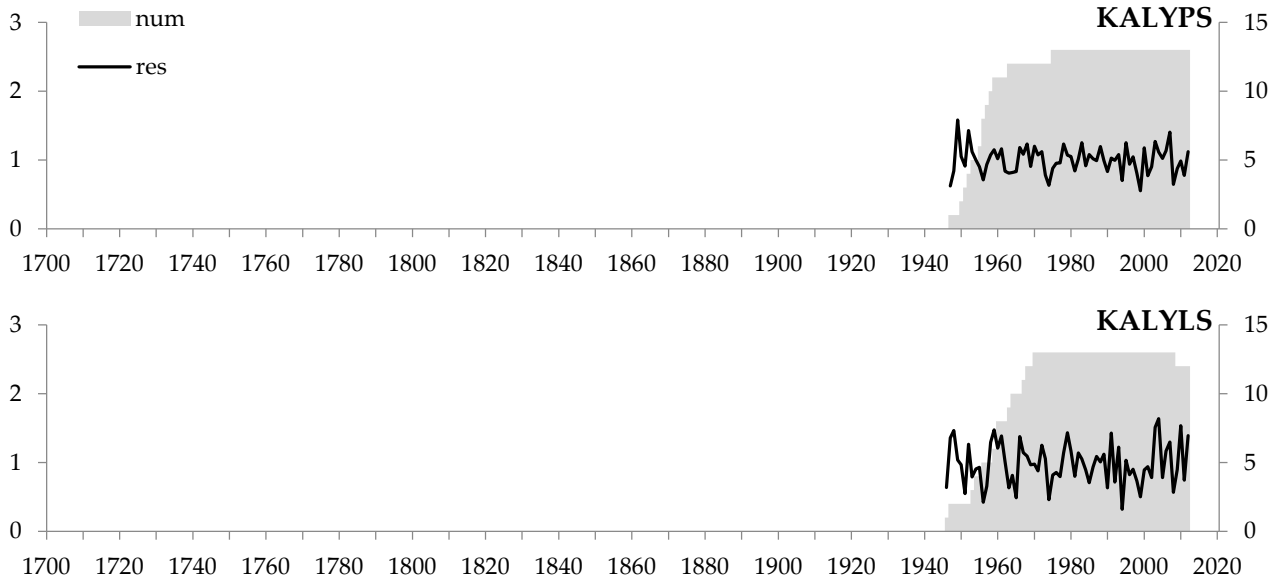


Figure S3. Continued.

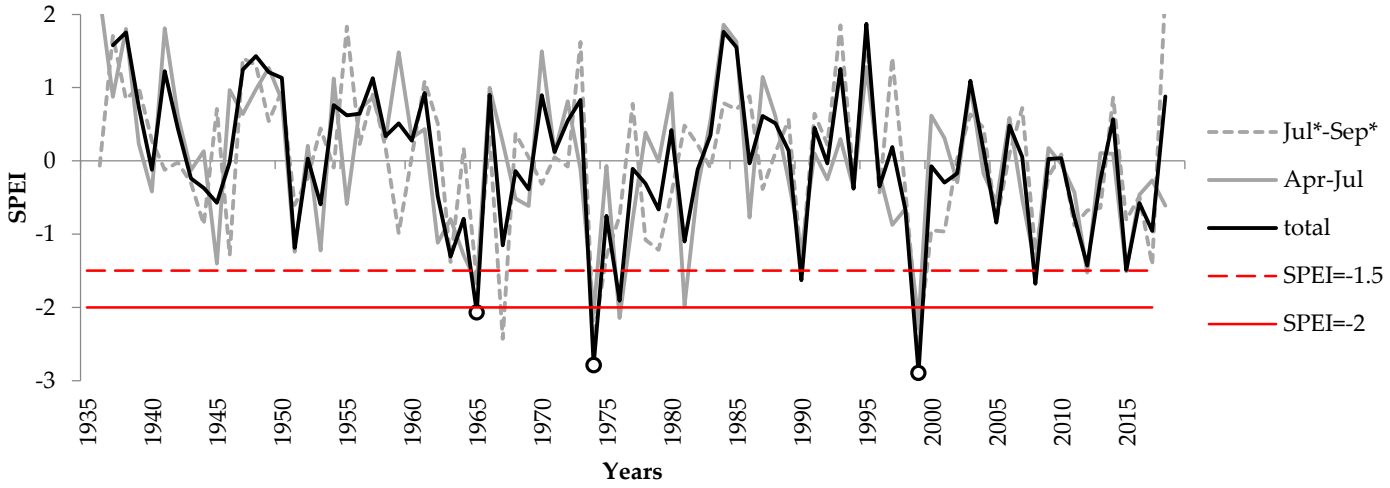


Figure S4. Dynamics of regional SPEI averaged for previous July–September, current April–July, and both intervals together (total). All seasonal SPEI series were standardized to *SD*=1 after averaging. Markers depict three extreme drought years 1965, 1974 and 1999.

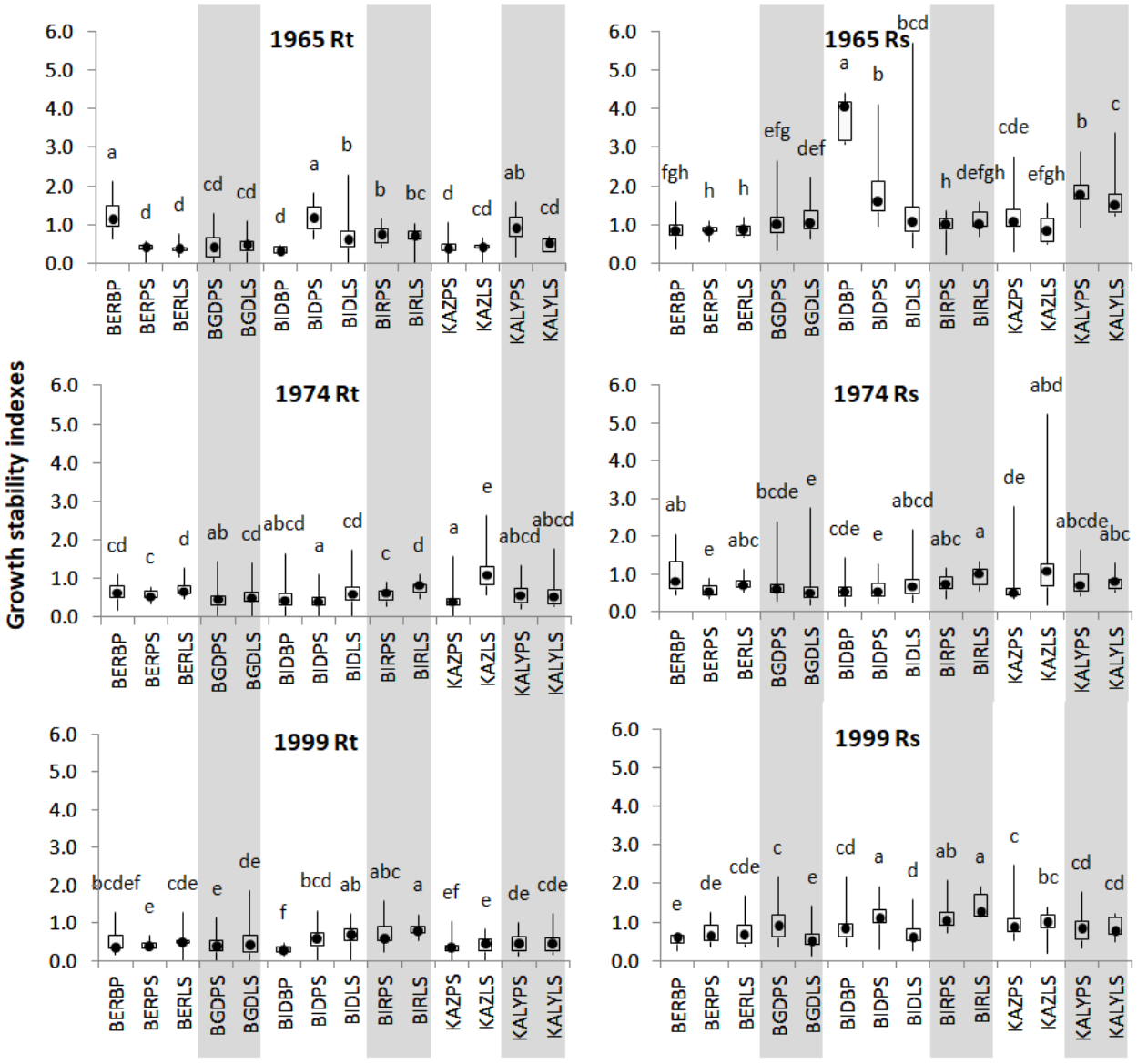


Figure S5. Ranges of individual trees' BAI-based drought-related stability indexes, resistance (Rt) and resilience (Rs), for the studied sites (BGD, BID, KAZ, BER, BIR, and KALY) and species (BP – *Betula pendula* Roth., PS – *Pinus sylvestris* L., LS – *Larix sibirica* Ledeb.). Mid-point – median value, box – inter-quartile range 25%–75%, whiskers – range of variation *min–max*. Comparison of site-species combinations was performed using ANOVA. Samples not marked by the same letter are different at $p < 0.05$.