Supplementary Material

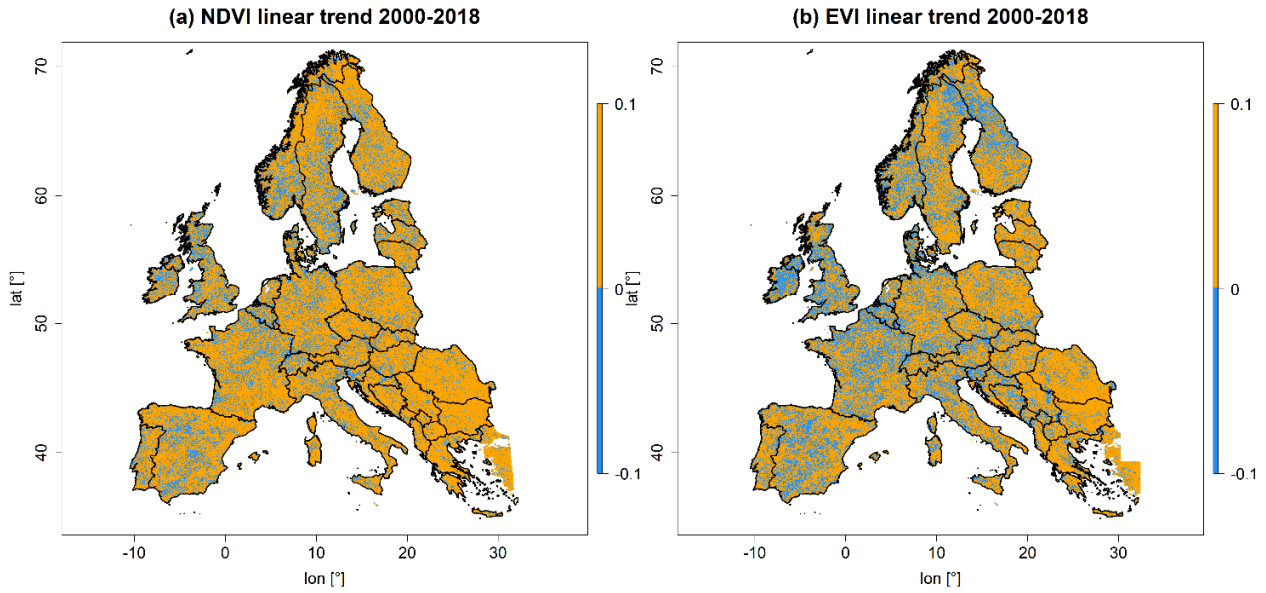

Figure S1: Maps depicting temporal trends of NDVI (a) and EVI (b) over the whole study period. Individual trends were subtracted from each individual pixel time-series.

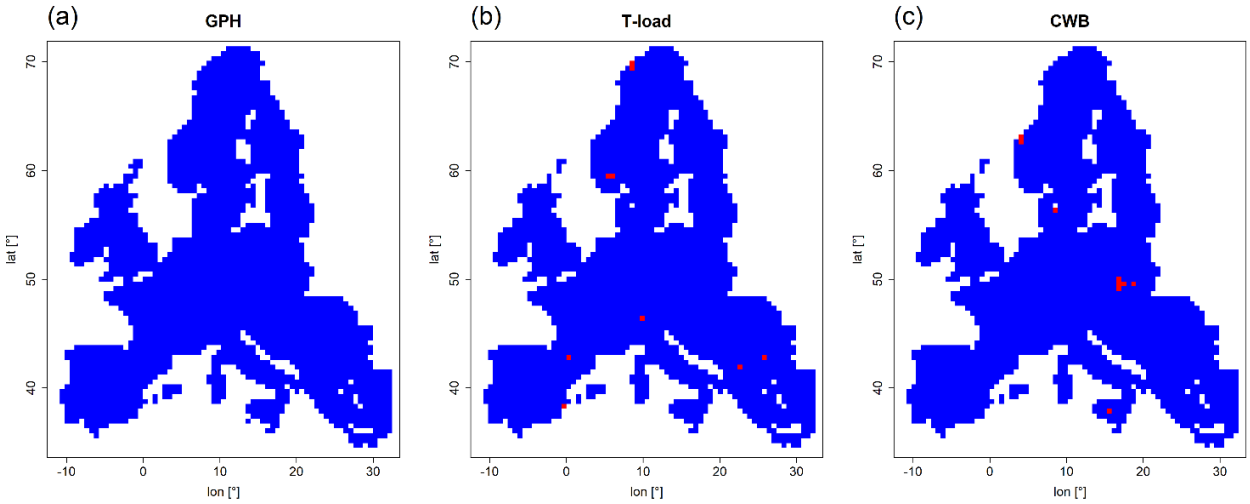

Figure S2: Maps depicting significance of Shapiro-Wilk normality test (red pixels refer to p < 0.001) for 500 hPa geopotential height (a), heat load (b), and climatic water balance (c). The number of significant tests ranges from 0 percent for geopotential height to 0.3 percent for heat load and thus lies within the order of expected type I errors (0.1 percent).

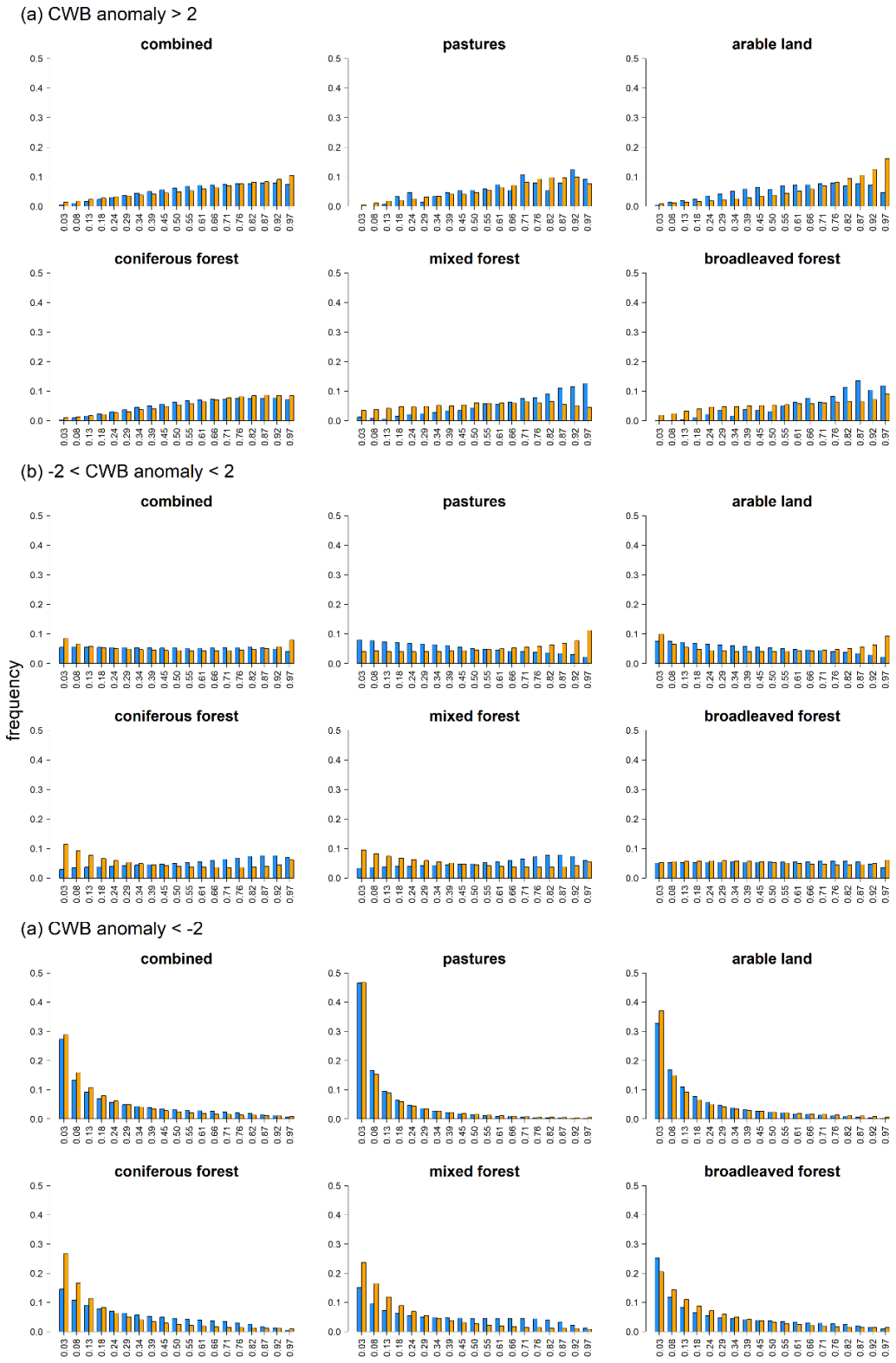

Figure S3: Histograms depicting the proportions representing the nineteen NDVI quantiles pooled according to CORINE land-cover classes for regions that featured (a) water surplus (CWB-anomaly > 2), (b) average conditions (- 2 < CWB-anomaly < 2), and (c) water deficit (CWB-anomaly < -2). Blue bars refer to 2003, orange bars to 2018.

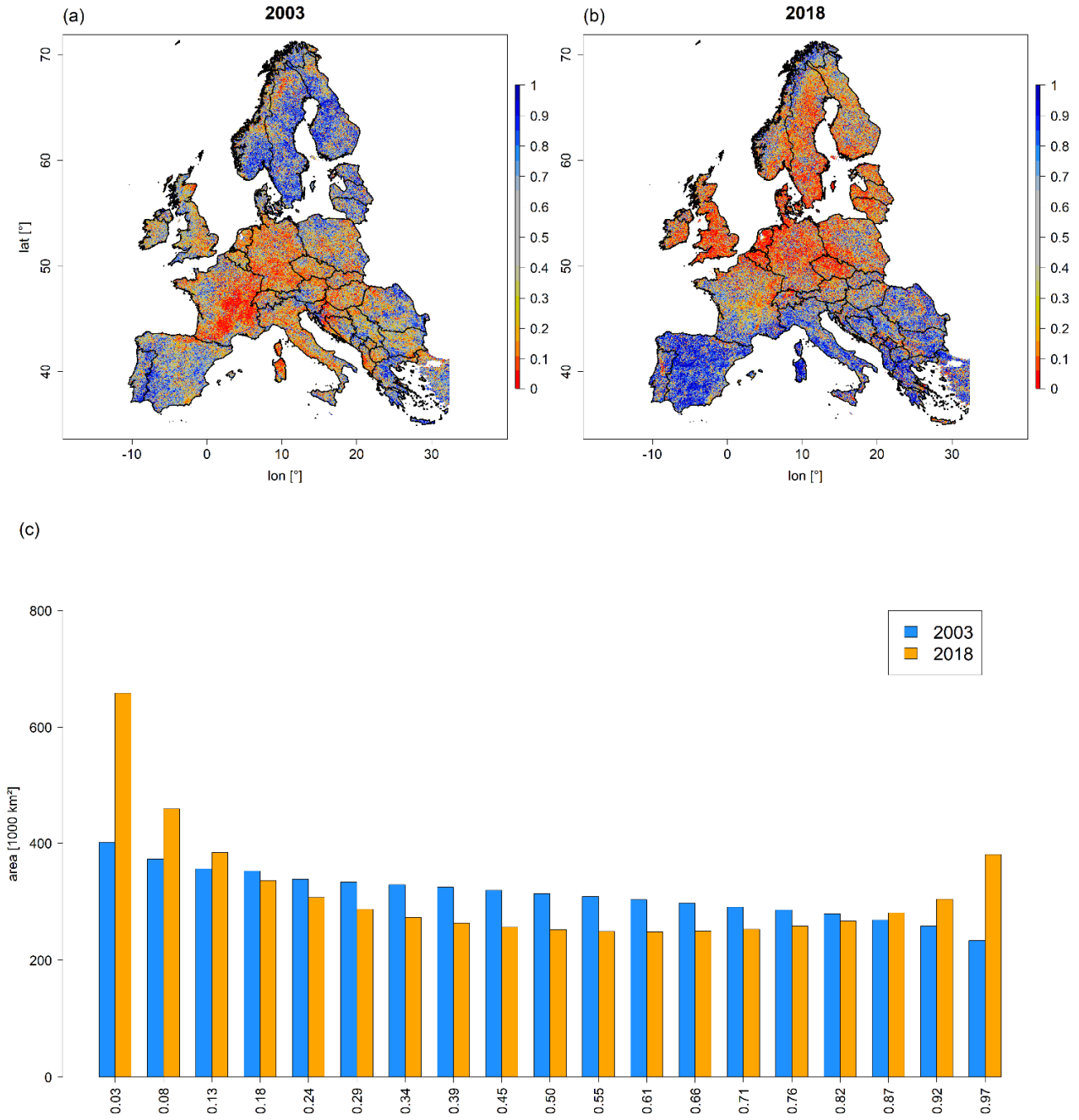

Figure S4: MODIS EVI quantiles representing peak-season conditions at the end of July (DOY 209) in 2003 (a) and 2018 (b) as well as the corresponding area histograms (in units of 1000 km²) representing the nineteen EVI quantiles (c). Blue colors in (a) and (b) indicate upper quantiles (thus a higher than average vegetation greenness), while orange to red colors indicate lower anomalies (i.e. lower than average vegetation greenness). Blue bars in (c) refer to 2003 and orange bars to 2018.

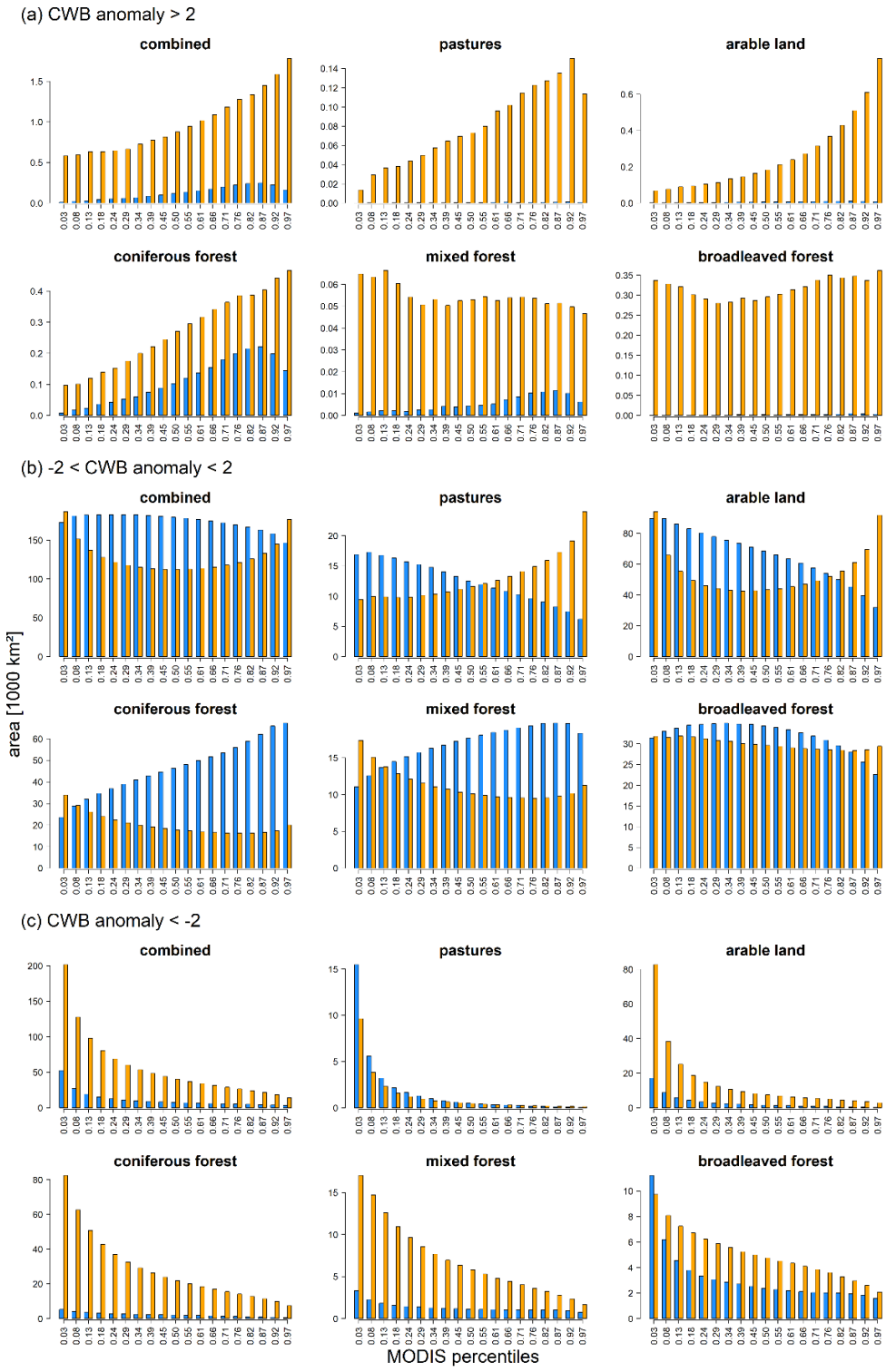

Figure S5: Histograms depicting the absolute areas (in units of 1000 km²) representing the nineteen EVI quantiles pooled according to CORINE land-cover classes for regions that featured (a) water surplus (CWB-anomaly > 2), (b) average conditions (- 2 < CWB-anomaly < 2), and (c) water deficit (CWB-anomaly < -2). Blue bars refer to 2003, orange bars to 2018.

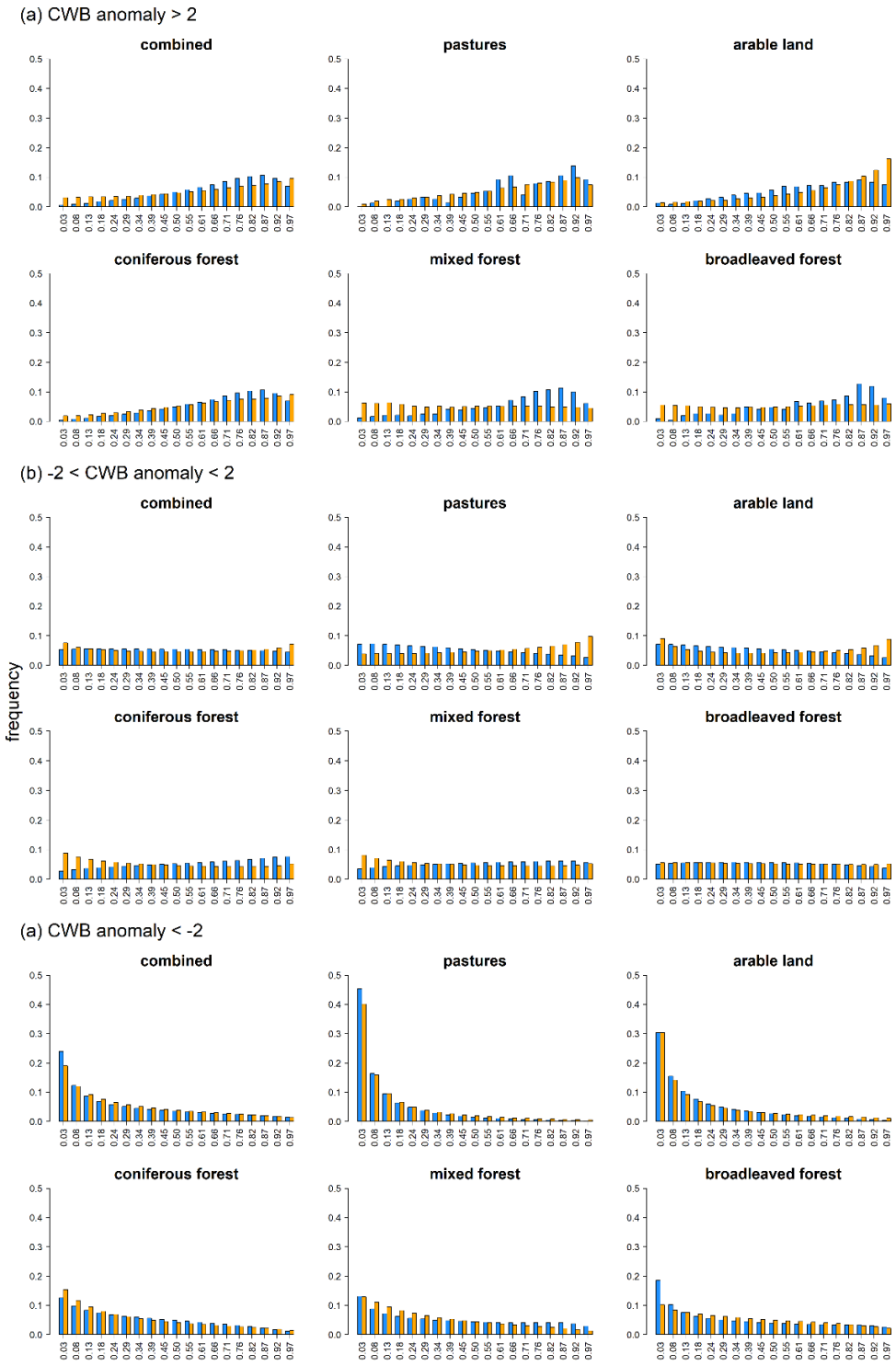

Fig. S6: Histograms depicting the proportions representing the nineteen EVI quantiles pooled according to CORINE land-cover classes for regions that featured (a) water surplus (CWB-anomaly > 2), (b) average conditions (- 2 < CWB-anomaly < 2), and (c) water deficit (CWB-anomaly < -2). Blue bars refer to 2003, orange bars to 2018.

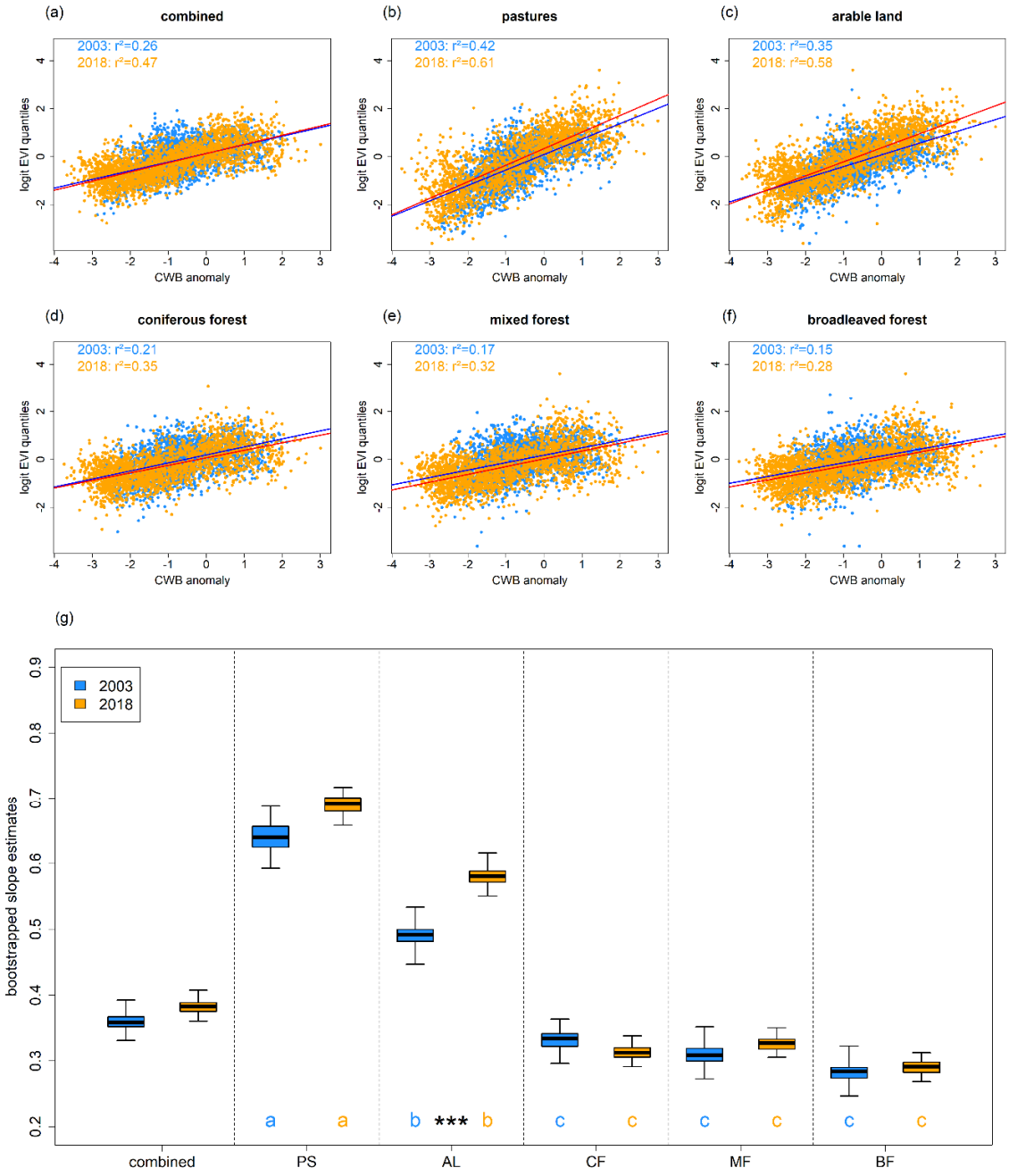

Fig. S7: (a-f) Scatterplots depicting the relationship between average logit-transformed EVI-quantiles and mean CWB of the 100 CWB percentiles in 2003 (blue) and 2018 (orange) for pastures (b), arable land (c), coniferous forests (d), mixed forest (e), broadleaved forest (f) and a combination of those (a). Blue lines depict the regression line for 2003, red lines for 2018. (g) Bootstrapped regression slope estimates for the five different land-cover classes as well as their combination. Minor case letters refer to group assignment of land-cover classes according to the overlap of 99.9 % confidence intervals of bootstrapped slopes in 2003 (blue) and 2018 (orange). Significance stars (***) indicate no overlap between 99.9 % confidence intervals of 2003 and 2018 for the respective land-cover class. PS = pastures, AL = arable land, CF = coniferous forest, MF = mixed forest, BF = broadleaved forest.