

Supplementary Materials:

Table S1. Trends in annual and seasonal temperature, precipitation, relative humidity, vapor pressure deficit, sunshine hours, and Palmer drought severity index (PDSI). Bold type indicates significant linear trends ($p \leq 0.05$).

	Temperature (°C/10a)	Precipitation (mm/10a)	Relative Humidity (%/10a)	Vapor Pressure Deficit (hPa/10a)	Sunshine Hours (hours/10a)	PDSI
1960–2015	0.16	−22.3 (−2%)	−0.5	0.01	−0.05	−0.97
1960–1987	−0.08	−0.48 (−0.0%)	0.21	−0.01	−0.15	0.85
1988–2015	0.41	−10.96 (1.0%)	−1.63	0.03	0.17	−2.32
Spring	0.10	−1.1 (−1.2%)	−0.61	0.01	−0.71	−0.87
Summer	0.09	−0.5 (−0.6%)	−0.48	0.02	−4.74	−0.95
Autumn	0.24	−4.7 (−5.9%)	−0.69	0.00	0.03	−1.11
Winter	0.20	−1.2 (−4.4%)	−0.33	0.001	−0.16	−0.95

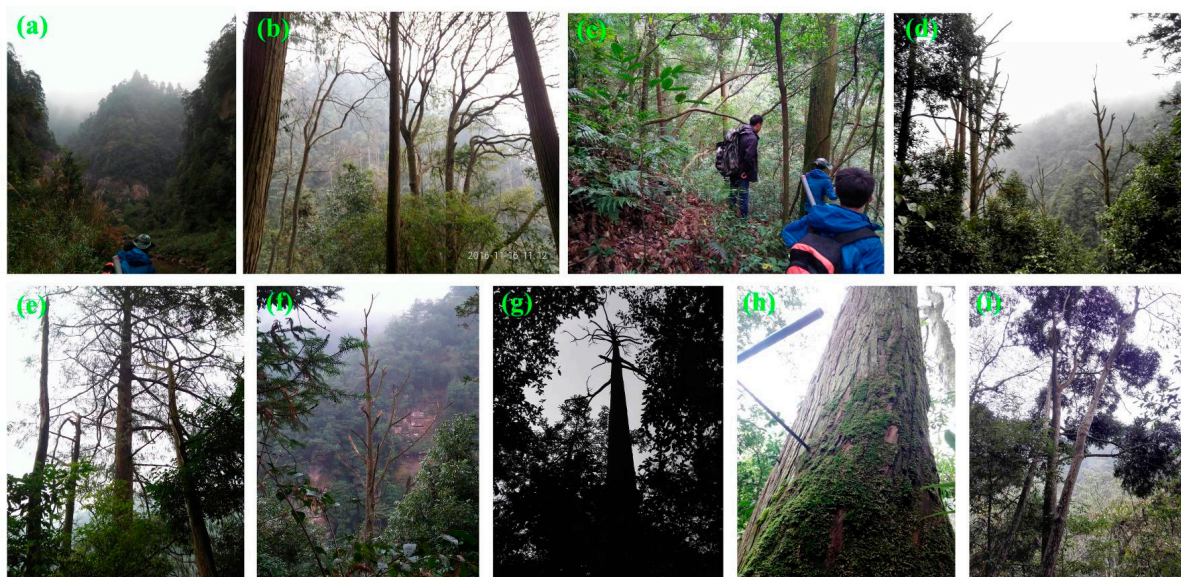


Figure S1. Photos of the sampling sites. (a)–(c) Photos show the habitat of the SCH02 site. (d)–(h) Photos show some dead *F. hodginsii* trees in the SCH02 site. (i) A living young *F. hodginsii* trees in SCH02. *F. hodginsii*, one of the dominant conifer tree species together with *Pinus massoniana*, *Pinus fenzeliana* and *Cunninghamia lanceolata*, stands tall amidst the dense evergreen deciduous forest canopy.

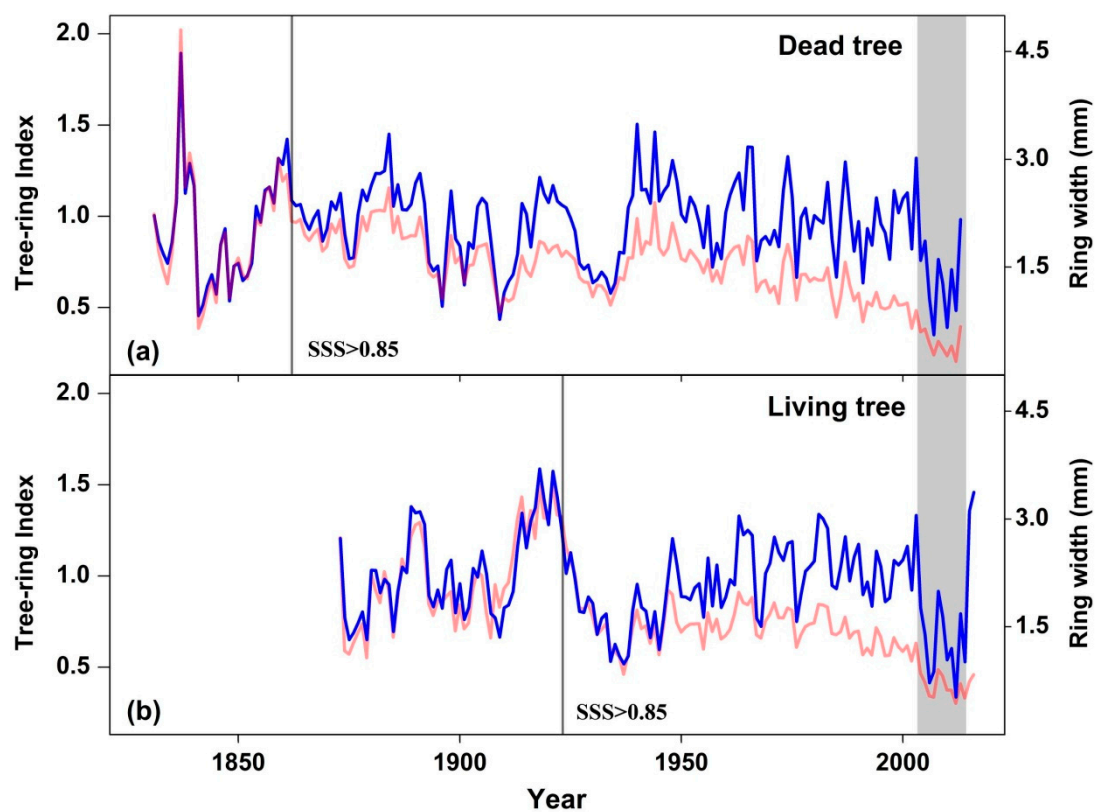


Figure S2. Ring width chronologies of dead (**a**, 26 cores) and living (**b**, 24 cores) *Fokienia hodginsii* trees. Blue lines show the detrended ring-width chronologies. Red lines show the mean raw ring width (mm).

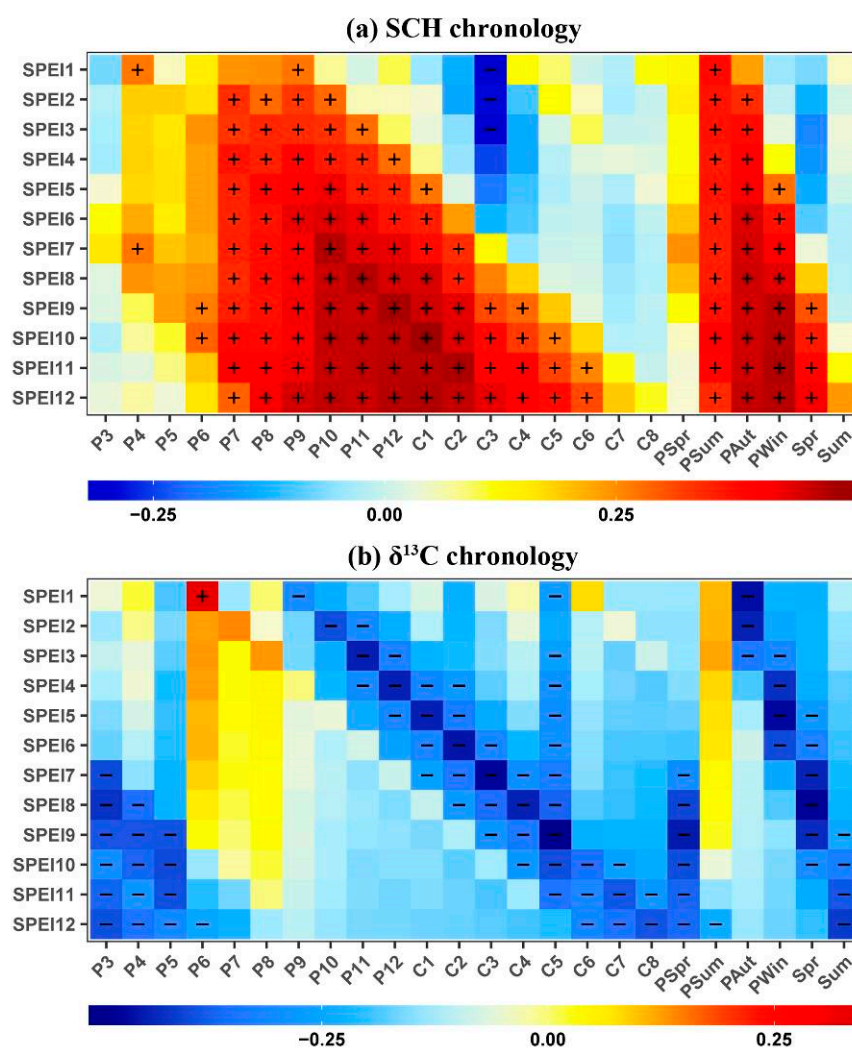


Figure S3. (a) Correlation coefficients between STD chronology and monthly SPEI at different time scales for the period between 1960 and 2015. Correlations with seasonal variables is also shown. (b) Correlations with the same environmental variables as (a) and $\delta^{13}\text{C}$. Positive and negative correlations with $\geq 95\%$ significance level are highlighted with '+' or '-', respectively.

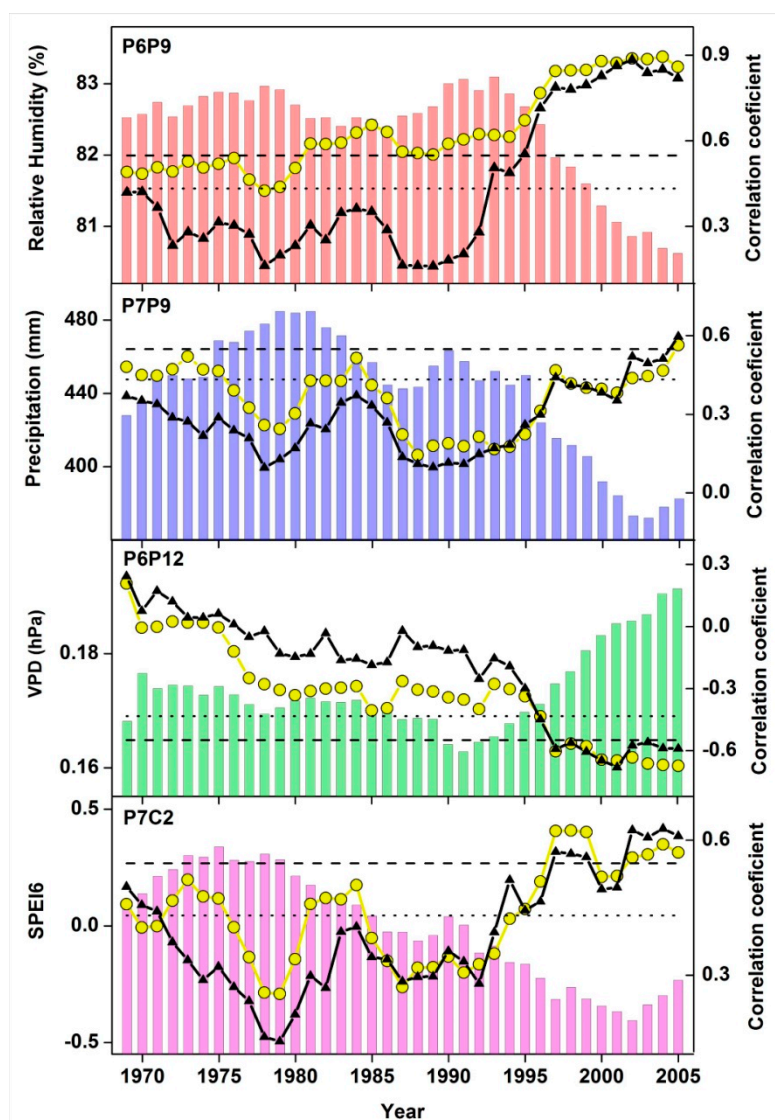


Figure S4. Twenty-one-year running correlations of the SCH01 (yellow line with dotted symbol) and SCH02 (dark line with triangle symbol) with RH (previous September–current May), precipitation (previous September–current February), VPD (previous November–current May), and PDSI (previous November–current May) during 1960–2015. For comparison, a 21-year running mean of the climate variables (Bars) is shown. The s-axis indicates the center of the 21-year window.