

Provenance-specific climate sensitivity of *Pinus massoniana* – a multi-environmental trial in subtropical China

Supplementary Material

Table S1. Descriptive statistics (mean $\pm$ standard deviation) of the studied datasets of tree-ring width and tree-ring density for the common period from 1987 to 2016

Provenance	CA test site				TZS test site			
	EW (mm)	LW (mm)	MND (kg $\cdot$ m ⁻³)	MXD (kg $\cdot$ m ⁻³)	EW (mm)	LW (mm)	MND (kg $\cdot$ m ⁻³)	MXD (kg $\cdot$ m ⁻³)
AHTP	1.89 $\pm$ 0.87	2.07 $\pm$ 0.81	73 $\pm$ 9	321 $\pm$ 40	2.41 $\pm$ 0.96	1.88 $\pm$ 0.80	67 $\pm$ 8	378 $\pm$ 45
FJSW	2.18 $\pm$ 1.04	1.90 $\pm$ 0.66	66 $\pm$ 8	389 $\pm$ 49	1.83 $\pm$ 0.73	1.11 $\pm$ 0.46	76 $\pm$ 10	373 $\pm$ 44
FJYD	2.49 $\pm$ 0.96	2.33 $\pm$ 1.02	102 $\pm$ 13	392 $\pm$ 47	1.92 $\pm$ 0.61	1.42 $\pm$ 0.62	107 $\pm$ 14	372 $\pm$ 52
GDRY	2.52 $\pm$ 0.94	2.35 $\pm$ 1.01	71 $\pm$ 9	360 $\pm$ 42	2.04 $\pm$ 0.78	1.41 $\pm$ 0.57	81 $\pm$ 10	393 $\pm$ 45
GDXY	2.11 $\pm$ 0.71	1.93 $\pm$ 0.92	117 $\pm$ 13	376 $\pm$ 45	2.18 $\pm$ 0.84	1.51 $\pm$ 0.63	93 $\pm$ 12	354 $\pm$ 40
GXCX	2.62 $\pm$ 0.89	2.36 $\pm$ 1.14	121 $\pm$ 15	375 $\pm$ 47	2.18 $\pm$ 0.79	2.20 $\pm$ 0.91	98 $\pm$ 10	379 $\pm$ 45
GXGC	2.05 $\pm$ 0.84	1.86 $\pm$ 0.75	119 $\pm$ 16	383 $\pm$ 51	2.54 $\pm$ 1.02	1.78 $\pm$ 0.74	96 $\pm$ 11	370 $\pm$ 52
GZDY	2.47 $\pm$ 1.06	1.70 $\pm$ 0.69	94 $\pm$ 9	391 $\pm$ 41	2.23 $\pm$ 0.87	1.57 $\pm$ 0.64	75 $\pm$ 9	376 $\pm$ 54
GZHP	1.88 $\pm$ 0.77	1.81 $\pm$ 0.74	121 $\pm$ 13	418 $\pm$ 54	1.82 $\pm$ 0.70	1.29 $\pm$ 0.53	93 $\pm$ 10	408 $\pm$ 41
GZLP	1.41 $\pm$ 0.74	1.77 $\pm$ 0.56	73 $\pm$ 9	387 $\pm$ 41	1.93 $\pm$ 0.75	1.35 $\pm$ 0.55	91 $\pm$ 11	402 $\pm$ 52
HBTS	1.89 $\pm$ 0.89	1.74 $\pm$ 0.59	69 $\pm$ 9	377 $\pm$ 45	1.68 $\pm$ 0.68	1.29 $\pm$ 0.54	91 $\pm$ 11	381 $\pm$ 43
HBYA	1.34 $\pm$ 0.64	1.44 $\pm$ 0.51	77 $\pm$ 10	382 $\pm$ 41	2.44 $\pm$ 1.05	1.69 $\pm$ 0.68	92 $\pm$ 10	408 $\pm$ 56
HNAH	1.40 $\pm$ 0.59	1.47 $\pm$ 0.62	107 $\pm$ 17	371 $\pm$ 46	2.34 $\pm$ 0.95	1.69 $\pm$ 0.72	98 $\pm$ 12	415 $\pm$ 60
HNTB	1.42 $\pm$ 0.62	1.53 $\pm$ 0.63	80 $\pm$ 10	394 $\pm$ 50	1.20 $\pm$ 0.45	1.20 $\pm$ 0.51	85 $\pm$ 11	396 $\pm$ 49
HNZX	1.95 $\pm$ 0.86	2.05 $\pm$ 0.75	96 $\pm$ 12	403 $\pm$ 48	1.40 $\pm$ 0.58	1.40 $\pm$ 0.57	83 $\pm$ 12	405 $\pm$ 53
JXJA	2.04 $\pm$ 0.84	1.72 $\pm$ 0.64	63 $\pm$ 8	330 $\pm$ 44	1.48 $\pm$ 0.63	0.96 $\pm$ 0.40	77 $\pm$ 9	380 $\pm$ 48
SCNJ	1.90 $\pm$ 0.89	1.92 $\pm$ 0.70	89 $\pm$ 13	410 $\pm$ 51	1.88 $\pm$ 0.76	2.04 $\pm$ 0.84	86 $\pm$ 8	430 $\pm$ 52
ZJQY	2.09 $\pm$ 0.97	1.90 $\pm$ 0.62	75 $\pm$ 8	399 $\pm$ 49	1.77 $\pm$ 0.78	1.21 $\pm$ 0.50	84 $\pm$ 10	379 $\pm$ 41
Mean	1.98	1.88	89.61	381	1.96	1.50	87.39	388.83

EW – early wood width; LW – late wood width; MND – minimum early wood density; MXD – maximum late wood density.

Table S2. Establish regression analysis of MXD, MND and main environmental factors of provenance

Trees round indicators	MXD		MND	
	CA	TZS	CA	TZS
Latitude	0.326	0.368	0.221	0.194
Longitude	0.303 (–)	0.256 (–)	0.430	0.321
Mean annual temperature	0.596*	0.675*	0.608*	0.633*
Mean temperature in January	0.333	0.354	0.275	0.432
Mean temperature from May to August	0.672*	0.632*	0.631*	0.654*
Mean annual maximum daily temperature	0.632*	0.701*	0.612*	0.584*
Mean annual minimum daily temperature	0.172	1.155 (–)	0.098	0.187
Annual total precipitation	0.458 (–)	0.613* (–)	0.311 (–)	0.587* (–)
Precipitation in January	0.176	0.304 (–)	0.244 (–)	0.108 (–)
Mean precipitation from May to August	0.405 (–)	0.617* (–)	0.398 (–)	0.591* (–)

*stands for significant difference level ($p < 0.05$), *stands for extremely significant level ($p < 0.01$); (–) stands for a negative relationship.

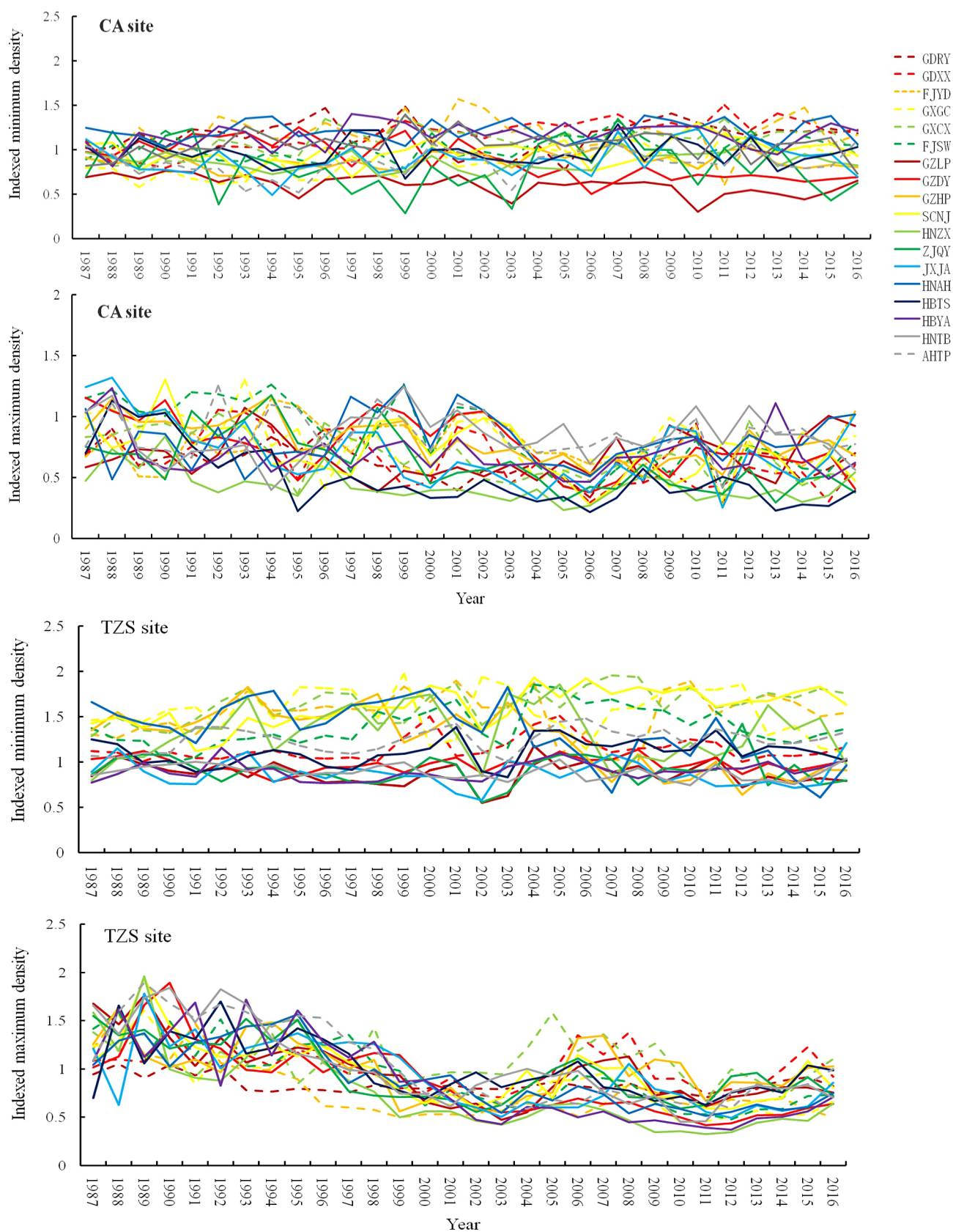


Fig. S1. Indexed minimum and maximum wood density series for the two study sites