

Table S8. Percentage change (%) of and lnRR factors in response to warming under forest and grassland system. TC, total carbon; SWC, soil water content; FN, foliar nitrogen; FP, foliar phosphorus; FV/FM, Maximum quantum yield of PSII; SLA, specific leaf area; WUE, water use efficiency; Pn, net photosynthetic rate; Gs, stomatal conductance; T, transpiration rate; $\delta^{13}\text{C}$, carbon stable isotope composition; SD, stomatal density; SS, stomatal size.

Variables	Ecosystems	QM	P(QM)	RR (%)	lnRR	95%CI
pH	Forest	0.38	0.8	2.54	0.025	[-0.06,0.11]
	Grassland	0.38	0.8	-0.6	-0.006	[-0.33,0.31]
TC	Forest	2.22	0.3	-1.80	-0.018	[-0.17,0.13]
	Grassland	2.22	0.3	13.63	0.128	[-0.04,0.3]
SWC	Forest	123.39	<0.0001	0.71	0.007	[-0.08,0.1]
	Grassland	123.39	<0.0001	-32.29	-0.39	[-0.46, -0.32]
FN	Forest	1.09	0.6	-6.21	-0.064	[-0.19,0.06]
	Grassland	1.09	0.6	1.12	0.011	[-0.19,0.21]
FP	Forest	4.32	0.11	-8.26	-0.086	[-0.19,0.02]
	Grassland	4.32	0.11	-7.89	-0.082	[-0.21,0.05]
FV/FM	Forest	3.12	0.2	-1.59	-0.016	[-0.06,0.03]
	Grassland	3.12	0.2	-5.58	-0.057	[-0.13,0.01]
Chlorophyll	Forest	8.42	0.01	-18.66	-0.207	[-0.36, -0.06]
	Grassland	8.42	0.01	-7.1	-0.074	[-0.22,0.07]
SLA	Forest	2310	<0.0001	8.96	0.086	[-0.02,0.19]
WUE	Forest	5.95	0.05	10.3	0.098	[0.02,0.18]
	Grassland	5.95	0.05	1.31	0.013	[-0.12,0.14]
Pn	Forest	2.29	0.3	4.92	0.048	[-0.05,0.15]
	Grassland	2.29	0.3	-8.24	-0.086	[-0.23,0.06]
Gs	Forest	12.31	0.002	0.01	0.0001	[-0.09,0.09]
	Grassland	12.31	0.002	-19.22	-0.214	[-0.33, -0.09]
T	Forest	7.68	0.02	7.99	0.077	[-0.03,0.18]
	Grassland	7.68	0.02	-13.26	-0.142	[-0.26, -0.02]
$\delta^{13}\text{C}$	Forest	17.29	0.0002	6.42	0.062	[0.03,0.09]
	Grassland	17.29	0.0002	-7.37	-0.077	[-0.26,0.1]
SD	Forest	9.8	0.007	-11.44	-0.122	[-0.21, -0.04]
	Grassland	9.8	0.007	48.85	0.398	[-0.13,0.93]
SS	Forest	2.24	0.3	-1.73	-0.018	[-0.12,0.09]
	Grassland	2.24	0.3	-36.8	-0.459	[-1.07,0.16]