

Supplemental Materials

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Tables and Figures

Table S1 Annual changes of climate variables of 20 GCMs for WT, P-PET, P, PET, and AT in site AR.

Scenario	WT mean (cm/365d)	WT min (cm/365d)	P-PET (mm/365d)	P (mm/365d)	PET (mm/365d)	AT (Deg C/365d)
B	0	-1	290	1266	977	16.5
F1	-1	-3	233	1295	1062	18.1
F2	-1	-3	215	1322	1107	18.9
F3	-2	-3	199	1298	1100	18.8
F4	-4	-5	106	1303	1198	20.4
$\Delta F1B$	-1	-2	-57	29	85	1.6
$\Delta F2B$	-1	-2	-75	56	130	2.4
$\Delta F3B$	-2	-2	-91	32	123	2.3
$\Delta F4B$	-4	-4	-184	37	221	3.9

Note: B:1980-1999, historical baseline; F1:2040-2059, RCP 4.5, future scenario 1; F2:2080-2099, RCP 4.5, future scenario 2; F3:2040-2059, RCP 8.5, future scenario 3; F4:2080-2099, RCP 8.5, future scenario 4; Values of ΔF_nB (n=1, 2, 3, 4) indicate the values of scenario F_n minus values of baseline scenario.

Table S2 Annual changes of climate variables of 20 GCMs for WT, P-PET, P, PET, and AT in site LP.

Scenario	WT mean (cm/365d)	WT min (cm/365d)	P-PET (mm/365d)	P (mm/365d)	PET (mm/365d)	AT (Deg C/365d)
B	-100	-110	313	1275	963	16.1
F1	-106	-116	263	1318	1055	17.9
F2	-107	-118	241	1343	1103	18.7
F3	-108	-118	231	1325	1093	18.5
F4	-119	-127	138	1338	120	20.4
$\Delta F1B$	-6	-6	-50	43	92	1.8
$\Delta F2B$	-7	-8	-72	68	140	2.6
$\Delta F3B$	-8	-8	-82	50	130	2.4
$\Delta F4B$	-19	-17	-175	63	238	4.3

Note: B:1980-1999, historical baseline; F1:2040-2059, RCP 4.5, future scenario 1; F2:2080-2099, RCP 4.5, future scenario 2; F3:2040-2059, RCP 8.5, future scenario 3; F4:2080-2099, RCP 8.5, future scenario 4; Values of ΔF_nB (n=1, 2, 3, 4) indicate the values of scenario F_n minus values of baseline scenario.

Table S3 Annual changes of climate variables of 20 GCMs for WT, P-PET, P, PET, and AT in site SC.

Scenario	WT mean (cm/365d)	WT min (cm/365d)	P-PET (mm/365d)	P (mm/365d)	PET (mm/365d)	AT (Deg C/365d)
B	-16	-19	142	1192	1050	18.1
F1	-18	-22	67	1217	1150	19.8
F2	-18	-21	60	1262	1202	20.6
F3	-19	-22	49	1241	1192	20.5
F4	-23	-25	-65	1252	1316	22.4
B	-16	-19	142	1192	1050	18.1
$\Delta F2B$	-2	-2	-82	70	152	2.5
$\Delta F3B$	-3	-3	-93	49	142	2.5
$\Delta F4B$	-7	-6	-207	60	266	4.3

Note: B:1980-1999, historical baseline; F1:2040-2059, RCP 4.5, future scenario 1; F2:2080-2099, RCP 4.5, future scenario 2; F3:2040-2059, RCP 8.5, future scenario 3; F4:2080-2099, RCP 8.5, future scenario 4; Values of ΔF_nB (n=1, 2, 3, 4) indicate the values of scenario Fn minus values of baseline scenario.

Table S4 Annual changes of climate variables of 20 GCMs for WT, P-PET, P, PET, and AT in FL–UP.

Scenario	WT mean (cm/365d)	WT min (cm/365d)	P-PET (mm/365d)	P (mm/365d)	PET (mm/365d)	AT (Deg C/365d)
B	-73	-81	165	1318	1153	20.6
F1	-78	-88	83	1333	1250	22.2
F2	-78	-83	74	1376	1302	22.9
F3	-80	-88	46	1338	1292	22.8
F4	-90	-99	-124	1297	1420	24.6
$\Delta F1B$	-5	-7	-82	15	97	1.6
$\Delta F2B$	-5	-2	-91	58	149	2.3
$\Delta F3B$	-7	-7	-119	20	139	2.2
$\Delta F4B$	-17	-18	-289	-21	267	4.0

Note: B:1980-1999, historical baseline; F1:2040-2059, RCP 4.5, future scenario 1; F2:2080-2099, RCP 4.5, future scenario 2; F3:2040-2059, RCP 8.5, future scenario 3; F4:2080-2099, RCP 8.5, future scenario 4;

Values of ΔF_nB (n=1, 2, 3, 4) indicate the values of scenario F_n minus values of baseline scenario.

Table S5 Annual changes in averages of future climate variables of 20 GCMs for WT, P-PET, P, PET, and AT in FL–WET.

Scenario	WT mean (cm/365d)	WT min (cm/365d)	P-PET (mm/365d)	P (mm/365d)	PET (mm/365d)	AT (Deg C/365d)
B	2	-6	165	1318	1153	20.6
F1	-4	-14	83	1333	1250	22.2
F2	-5	-10	74	1376	1302	22.9
F3	-7	-17	46	1338	1292	22.8
F4	-20	-30	-124	1297	1420	24.6
$\Delta F1B$	-6	-8	-82	15	97	1.6
$\Delta F2B$	-7	-4	-91	58	149	2.3
$\Delta F3B$	-9	-11	-119	20	139	2.2
$\Delta F4B$	-22	-24	-289	-21	267	4.0

Note: B:1980-1999, historical baseline; F1:2040-2059, RCP 4.5, future scenario 1; F2:2080-2099, RCP 4.5, future scenario 2; F3:2040-2059, RCP 8.5, future scenario 3; F4:2080-2099, RCP 8.5, future scenario 4;

Values of ΔF_nB (n=1, 2, 3, 4) indicate the values of scenario F_n minus values of baseline scenario.

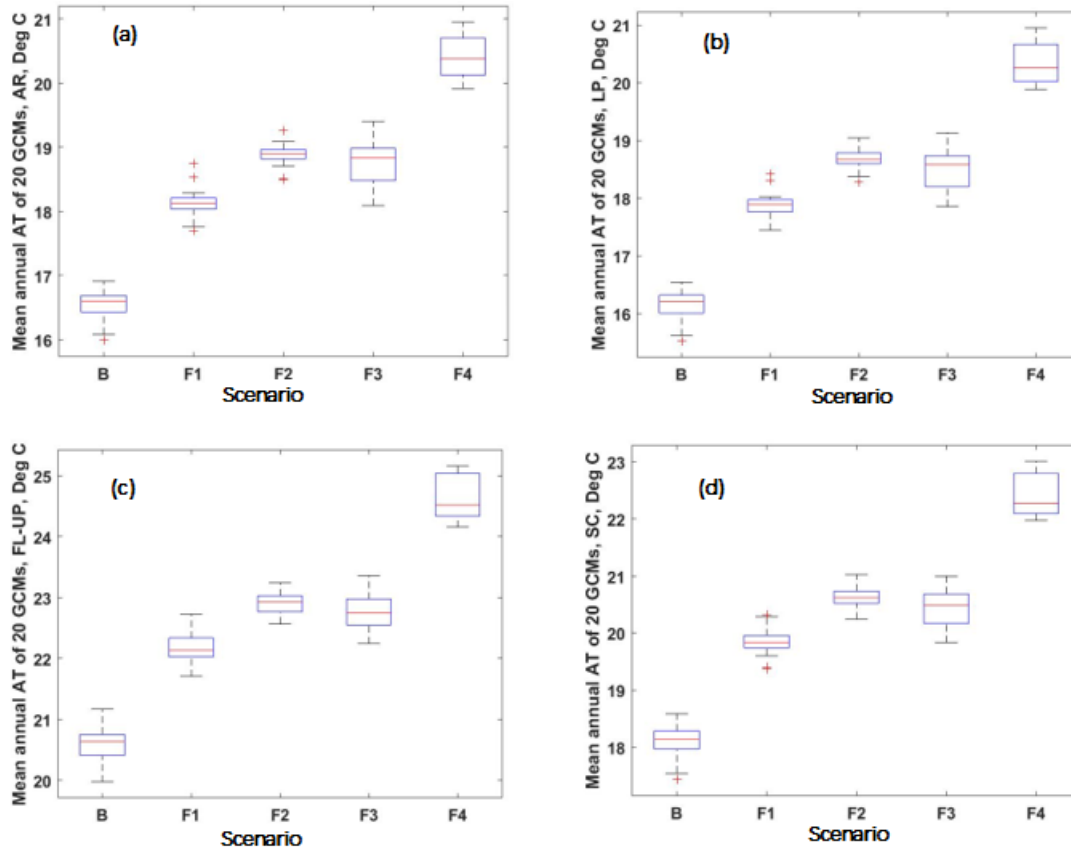


Fig. S1 Mean annual air temperature of 20 GCMs (unit: Deg C), (a): AR, (b): LP, (c): FL, (d) SC.

Note: B:1980-1999, historical baseline;

F1:2040-2059, RCP 4.5, future scenario 1; F2:2080-2099, RCP 4.5, future scenario 2;

F3:2040-2059, RCP 8.5, future scenario 3; F4:2080-2099, RCP 8.5, future scenario 4;

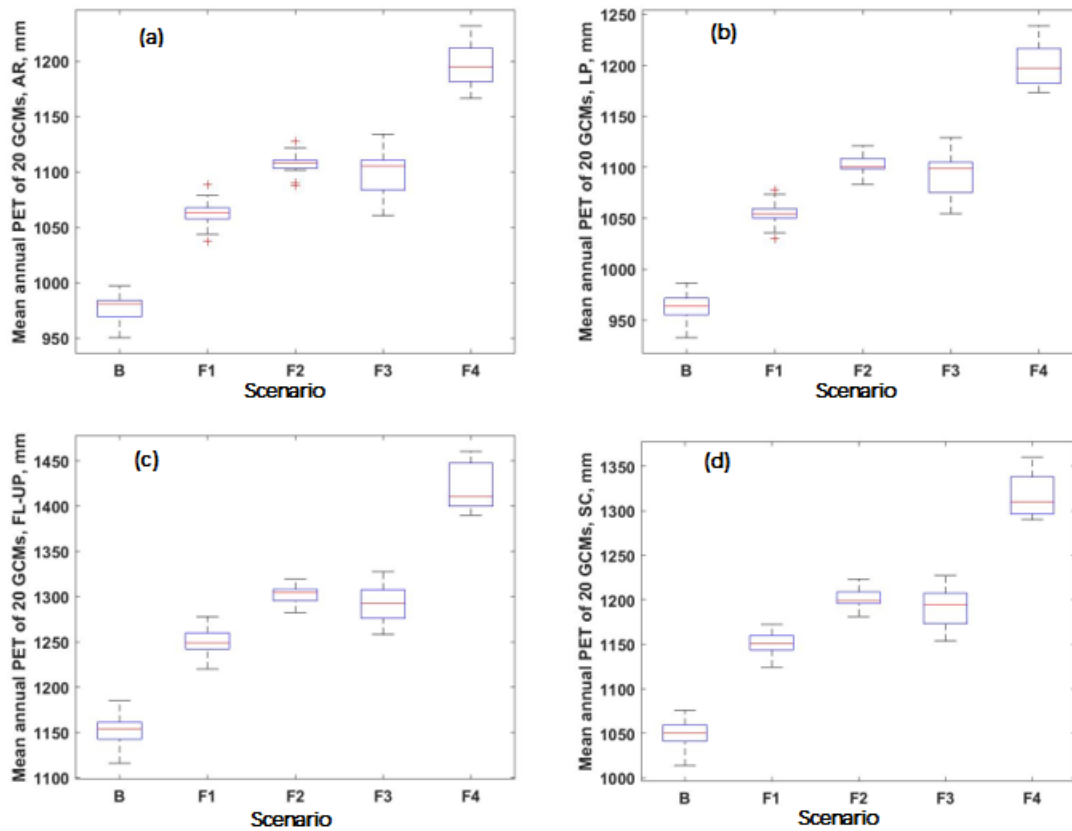


Fig. S2 Mean annual PET of 20 GCMs (unit: mm), (a): AR, (b): LP, (c): FL, (d): SC.

Note: B:1980-1999, historical baseline;

F1:2040-2059, RCP 4.5, future scenario 1; F2:2080-2099, RCP 4.5, future scenario 2;

F3:2040-2059, RCP 8.5, future scenario 3; F4:2080-2099, RCP 8.5, future scenario 4;

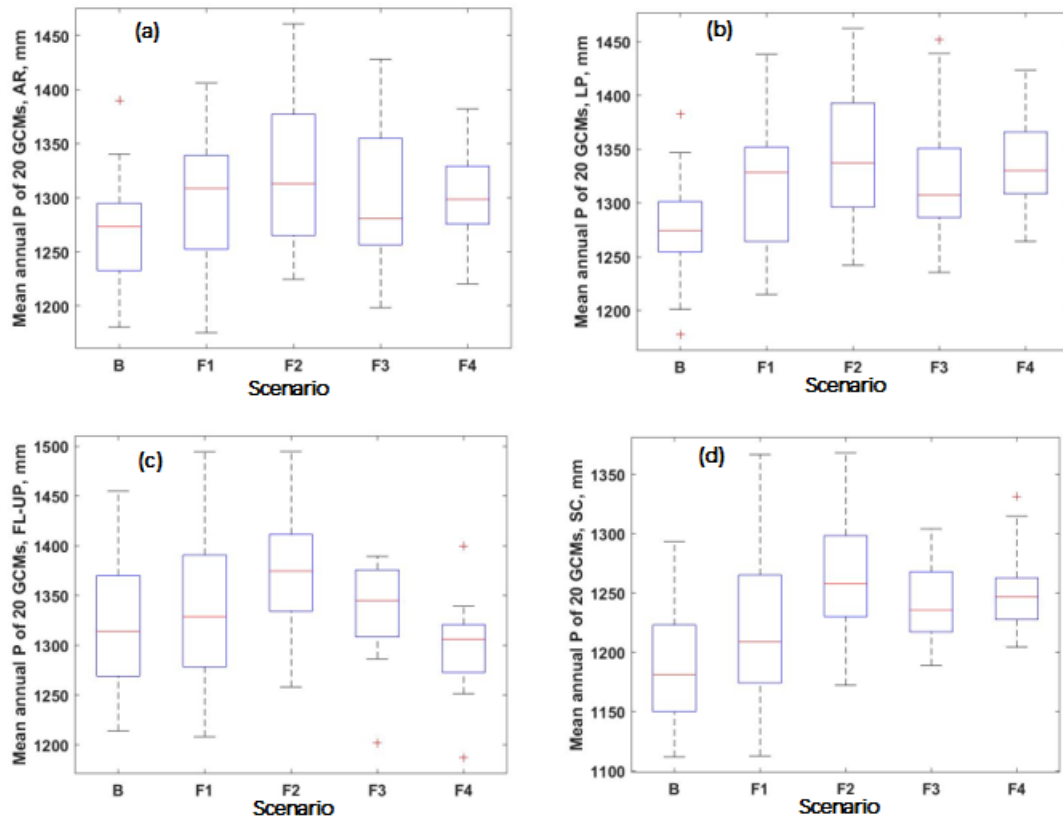


Fig. S3 Total annual precipitation of 20 GCMs (unit: mm), (a): AR, (b): LP, (c): FL, (d): SC.

Note: B:1980-1999, historical baseline;

F1:2040-2059, RCP 4.5, future scenario 1; F2:2080-2099, RCP 4.5, future scenario 2;

F3:2040-2059, RCP 8.5, future scenario 3; F4:2080-2099, RCP 8.5, future scenario 4;