

Supplementary Materials

“Evaluation of Future Changes in Climate Extremes over Southeast Asia Using Downscaled CMIP6 GCM Projections”

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Table S1. List of datasets used in this study.

Dataset		Temporal and	
name	Climate variable	spatial resolu- tions	Data periods
APHRODITE	- precipitation	Daily, $0.25^{\circ} \times 0.25^{\circ}$	1951-2015
	- minimum tempera- ture	Daily, $0.5^{\circ} \times 0.5^{\circ}$	1979-present
CPC	- maximum tempera- ture		
	- precipitation		
NEX-GDDP-CMIP6	- minimum tempera- ture	Daily, $0.25^{\circ} \times 0.25^{\circ}$	Historical: 1950-2014
	- maximum tempera- ture		Future: 2015-2100

Table S2. List of extreme indicators used in this research [4].

Variable	Label	Description	Unit
Precipitation	RX1day	Max precipitation at daily scale	mm/day
	R20	Number of days when precipitation exceeds 20 mm/day	days/year
	R99P	Daily precipitation value at the 99 th percentile	mm/day
	CDD	Max length of successive days with rainfall amount below 1 mm	days/year
Temperature	TXmax	Annual peak of Tmax	°C
	TNmin	Annual lowest value of Tmin	°C
	Tmax90P	90 th percentile of Tmax	°C
	Tmin10P	10 th percentile of Tmin	°C

Note: Max and min denote maximum and minimum, respectively; Tmax and Tmin denote the daily maximum and minimum temperatures, respectively.

Table S3. List of 29 GCMs for future projection in this study [63].

No.	Model	Countries	Variant	No.	Model	Countries	Variant
1	ACCESS-CM2	Australia	r1i1p1f1	16	INM-CM4-8	Russia	r1i1p1f1
2	ACCESS-ESM1-5	Australia	r1i1p1f1	17	INM-CM5-0	Russia	r1i1p1f1
3	BCC-CSM2-MR	China	r1i1p1f1	18	KACE-1-0-G	South Korea	r1i1p1f1
4	CanESM5	Canada	r1i1p1f1	19	KIOST-ESM	South Korea	r1i1p1f1
5	CMCC-CM2-SR5	Italy	r1i1p1f1	20	MIROC6	Japan	r1i1p1f1
6	CMCC-ESM2	Italy	r1i1p1f1	21	MIROC-ES2L	Japan	r1i1p1f2
7	CNRM-CM6-1	France	r1i1p1f2	22	MPI-ESM1-2-HR	Germany	r1i1p1f1
8	CNRM-ESM2-1	France	r1i1p1f2	23	MPI-ESM1-2-LR	Germany	r1i1p1f1
9	EC-Earth3	Europe	r1i1p1f1	24	MRI-ESM2-0	Japan	r1i1p1f1
10	EC-Earth3-Veg-LR	Europe	r1i1p1f1	25	NESM3	Germany	r1i1p1f1
11	FGOALS-g3	China	r3i1p1f1	26	NorESM2-LM	Norway	r1i1p1f1
12	GFDL-CM4	USA	r1i1p1f1	27	NorESM2-MM	Norway	r1i1p1f1
13	GFDL-ESM4	USA	r1i1p1f1	28	TaiESM1	Taiwan, China	r1i1p1f1
14	GISS-E2-1-G	USA	r1i1p1f2	29	UKESM1-0-LL	UK	r1i1p1f2
15	HadGEM3-GC31-LL	UK	r1i1p1f3				