

Supporting information for

[Unraveling scale-dependent flood responses to changing climate extremes over the Tibetan Plateau]

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Figure S1 and S2

Table S1

Figure S1

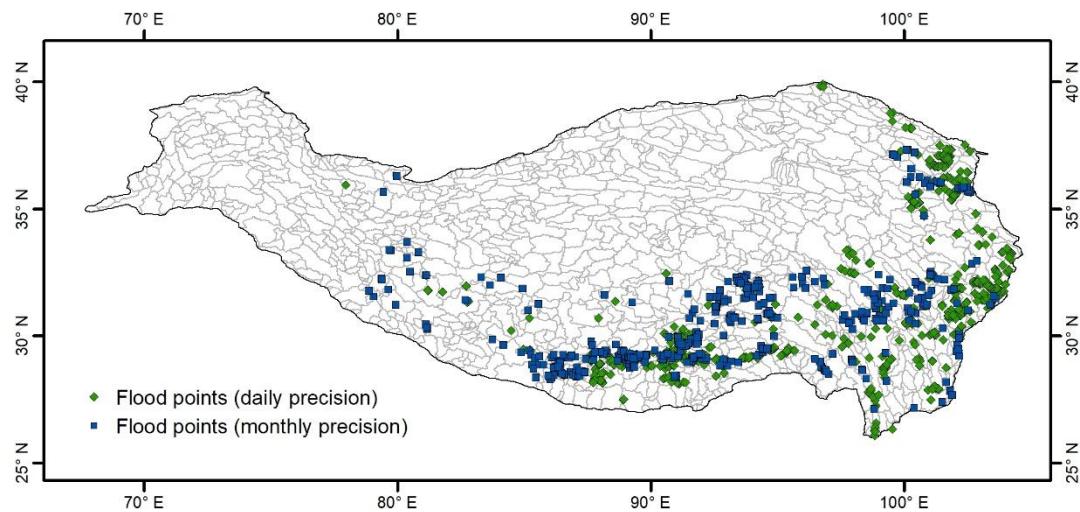


Fig. S1 Flood point records. The green dots correspond to flood records with a precision of daily resolution, and the blue dots correspond to those with a precision of monthly resolution.

Figure S2

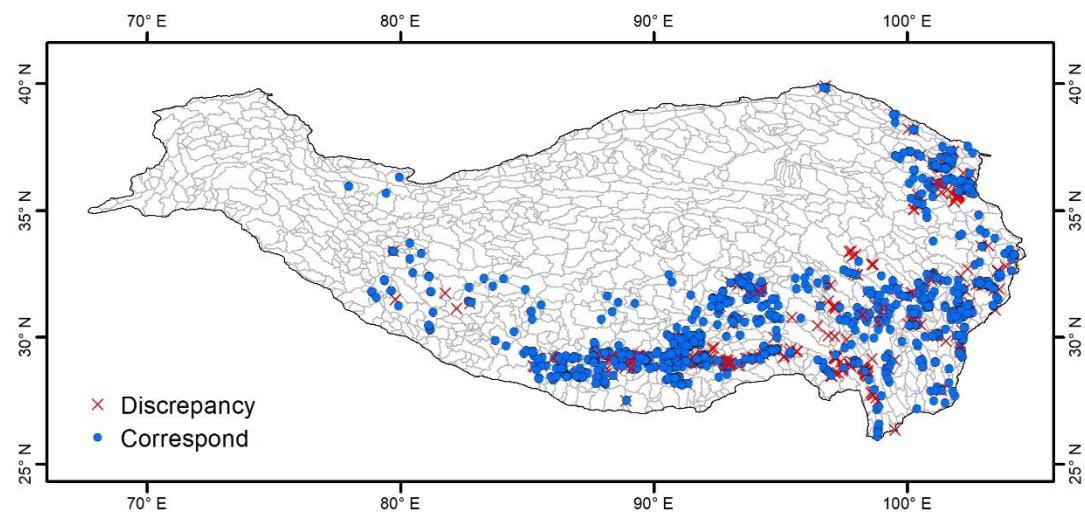


Fig. S2 The correspondence between flood events derived from GRFR data and observed flood records

Table S1

Tab. S1. Climate extreme indices

Index	Abbreviation	Definition
High temperature days	HT	Number of days with daily maximum temperature $>$ 90th percentile
Heatwave	HW	At least 3 consecutive days with daily maximum temperature $>$ 90th percentile
Low temperature days	LT	Number of days with daily minimum temperature $<$ 10th percentile
Persistent cold spell	CLT	At least 3 consecutive days with daily minimum temperature $<$ 10th percentile
Maximum daily maximum temperature	TX _x	Monthly highest daily maximum temperature
Maximum daily minimum temperature	TN _x	Monthly highest daily minimum temperature
Minimum daily maximum temperature	TX _n	Monthly lowest daily maximum temperature
Minimum daily minimum temperature	TN _n	Monthly lowest daily minimum temperature
Cold days	TX10p	Percentage of days with daily maximum temperature $<$ 10th percentile
Warm nights	TN90p	Percentage of days with daily minimum temperature $>$ 90th percentile

Diurnal temperature range	DTR	Monthly mean difference between daily max and min temperatures
Frost days	FD0	Number of days with daily minimum temperature $< 0^{\circ}\text{C}$
Extreme precipitation days	EP	Number of days with daily precipitation $> 90^{\text{th}}$ percentile
Persistent extreme precipitation	CEP	At least 3 consecutive days with daily precipitation $> 90^{\text{th}}$ percentile
Heavy precipitation amount	R95p	Annual total precipitation from days $> 95^{\text{th}}$ percentile
Extreme wet-day precipitation	R99p	Annual total precipitation from days $> 99^{\text{th}}$ percentile
Heavy rain days	R10	Number of days with daily precipitation $\geq 10 \text{ mm}$
Very heavy rain days	R20	Number of days with daily precipitation $\geq 20 \text{ mm}$
Consecutive wet days	CWD	Maximum number of consecutive days with daily precipitation $\geq 1 \text{ mm}$
Maximum 1-day precipitation	RX1day	Highest single-day precipitation amount
Maximum 5-day precipitation	RX5day	Highest 5-day cumulative precipitation amount
1-month Standardized Precipitation Evapotranspiration Index	SPEI1	Standardized difference between precipitation and potential evapotranspiration over 1-month timescale
3-month Standardized Precipitation Evapotranspiration Index	SPEI3	Standardized difference between precipitation and potential evapotranspiration over 3-month timescale
Palmer Drought Severity Index	PDSI	Integrated measure of drought/wetness conditions considering precipitation, temperature and soil moisture