

Table S1. Statistics for the linear trend of the considered time-series shown in Figure 6. We use the Sen Slope estimator and the Mann-Kendal test. The statistical test were carried out using the software R- 3.6.0 and the R package Modifiedmk. The variables are as follows: Tann - annual mean temperature; Pann- annual precipitation; Tamp - seasonal temperature amplitude; Tmonmax - warmest month temperature; Tmonmin - coldest month temperature; Pmonmax - monthly highest precipitation; Pmonmin - monthly lowest precipitation; AreaWintermax - area with maximum precipitation in the cold part of the year (October to March); AreaSummermin - area with minimum precipitation in the warm part of the year (April to September).

Time-series	Z-statistics	p-value	Linear trend (statistically significant at $\alpha=0,05$)	Sen statistics for the linear trend
1901-2021				
Tann	5.99	0.000000002	positive	0,01 deg/year
Pann	-0.66	0.51	no	-0.16 mm/month.year
Pmonmax	-0.12	0.91	no	-0.004 mm/month.year
Pmonmin	-2.23	0.03	positive	-0.04 mm/month.year
Tamp	-0.03	0.97	no	-0.0003 deg/year
Tmonmin	3.17	0.002	positive	0.015 deg/year
Tmonmax	5.02	0.0000005	positive	0.014 deg/year
AreaWintermax	-1.6	0.11	no	-539 Sq.km/year
AreaSummermin	-1.21	0.23	no	-529 Sq.km/year
1991-2021				
Tann	4.76	0.000002	positive	0.06 deg/year
Pann	1.33	0.18	no	3 mm/month.year
Pmonmax	0.85	0.4	no	0.18 mm/month.year
Pmonmin	0.2	0.84	no	0.05 mm/month.year
Tamp	-0.17	0.87	no	-0.01 deg/year
Tmonmin	2.0	0.04	positive	0.06 deg/year
Tmonmax	3.5	0.0005	positive	0.05 deg/year
AreaWintermax	1.05	0.29	no	3298 Sq.km/year
AreaSummermin	0.54	0.59	no	1721 Sq.km/year

Figure S1. Spectral periodograms of the considered time-series shown in Figure 6. The variables are as follows: Tann - annual mean temperature; Pann- annual precipitation; Tamp - seasonal temperature amplitude; Tmonmax - warmest month temperature; Tmonmin - coldest month temperature; Pmonmax - monthly highest precipitation; Pmonmin - monthly lowest precipitation; AreaWintermax - area with maximum precipitation in the cold part of the year (October to March); AreaSummermin - area with minimum precipitation in the warm part of the year (April to September). The dashed line marks the period of 20 years, and the blue line marks the 95% confidence interval for the highest peak.









