

Supplementary Materials

Table S1. Hydrological station data considered in this study.

River	Herault	Orb	Aude	Agly	Tet	Tech
Name station	Agde	Beziers	Moussan	Estagel	Perpignan	Argeles
Code station	Y2372010	Y2584010	Y1612010	Y0664040	Y0474030	Y0284060
% Raw data	97.1	88.3	82.1	86.5	81.5	70.4
% Filled	0	0.02	0.02	0.2	<0.01	0
% Total	97.1	88.3	82.1	86.7	81.5	70.4
Period	1959– 2018	1966– 2018	1965– 2018	1967– 2018	1970–2018	1976– 2018
Length of the period (years)	59	53	50	52	49	42
Mean annual specific water discharge (mm/year)	472	240	284	74	130	178
Mean annual water discharge (m ³ /s)	41.9	25.9	40.3	5.5	9.4	8.6
Trend (%)	–54	–23	–45	–55	–44	–50
P-value trends	0	0.11	0.02	0.02	0.07	0.02
5 th percentile (m ³ /s)	16.6	14	16.4	0.9	2.5	3.3
95 th percentile (m ³ /s)	82	44.5	76.5	13.5	21.1	16.5
Basin area (km ²)	2550	1330	4838	903	1300	729
Elevation (m)	367	444	462	508	1061	778

Table S2. Results of Sen's slope and Mann-Kendall test p-value for each hydro-climatic parameter whenever they are non-significant (normal format) or significant (underlined: p-value < 0.1, and bold: p-value < 0.05).

Basin	T	P	PET	PETt	Qobs	Qs	Qmod
Herault	0.03	–1.82	6.65	3.28	–6.05	<u>–3.58</u>	–4.2
Orb	0.03	–0.81	6.65	2.75	–2.94	–2.84	–4.13
Aude	0.02	–2.22	3.85	2.15	<u>–2.67</u>	–2.5	–2.51
Agly	0.02	–2.16	3.7	1.85	–2.45	–2.77	–2.31
Tet	0.02	<u>–2.66</u>	2.46	1.64	<u>–2.07</u>	–2.26	–2.54
Tech	0.03	–2.16	2.69	2.33	–4.71	<u>–2.27</u>	–3.55

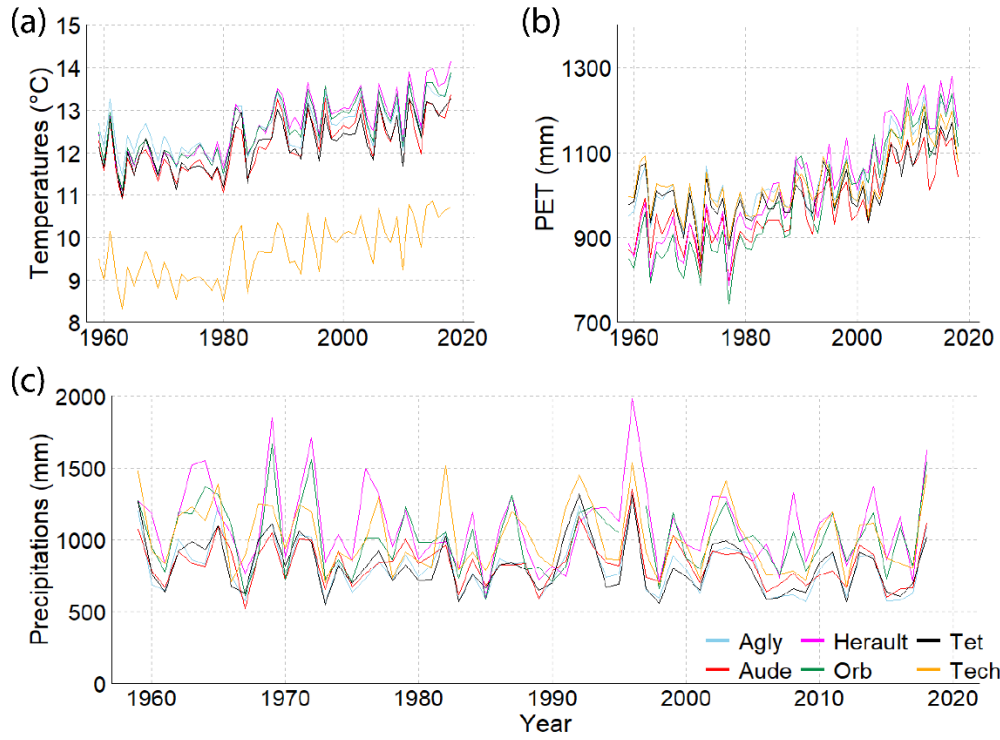


Figure S1. Evolution of annual temperatures (a), potential evapotranspiration (b), and annual precipitations (c).

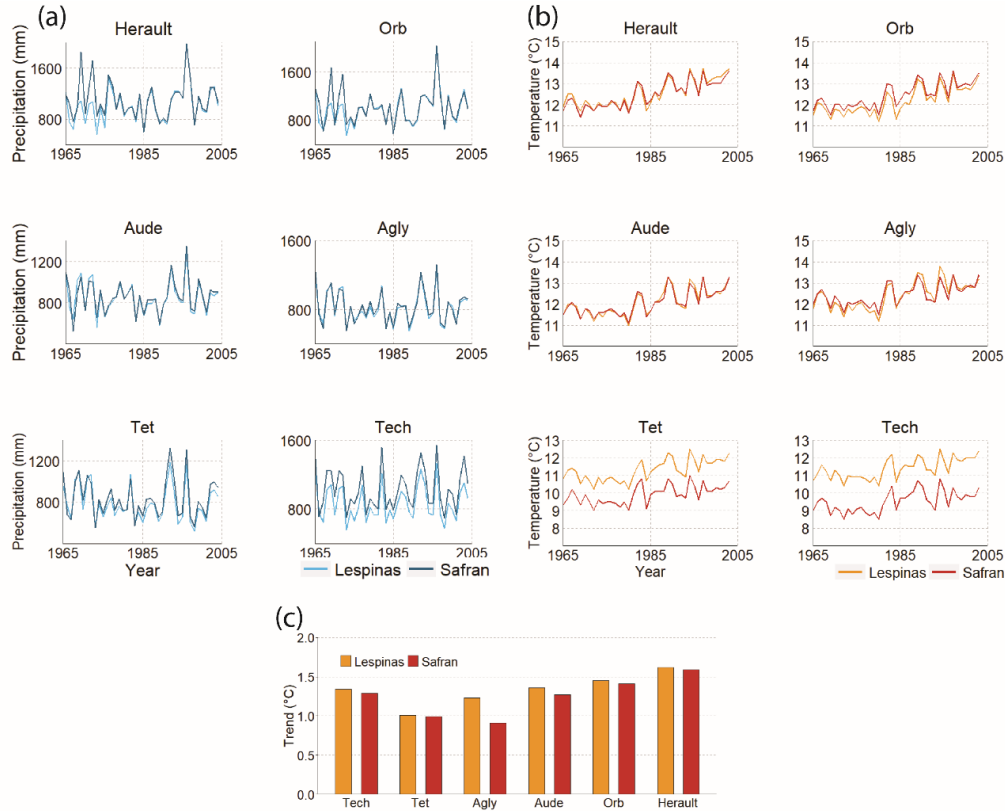


Figure S2. Comparison between the Safran climate data considered in this study and the climate station data processed by Lespinas et al., 2009: (a) evolution of precipitation, (b) evolution of temperatures, (c) linear temperature trends for the period 1965–2004.

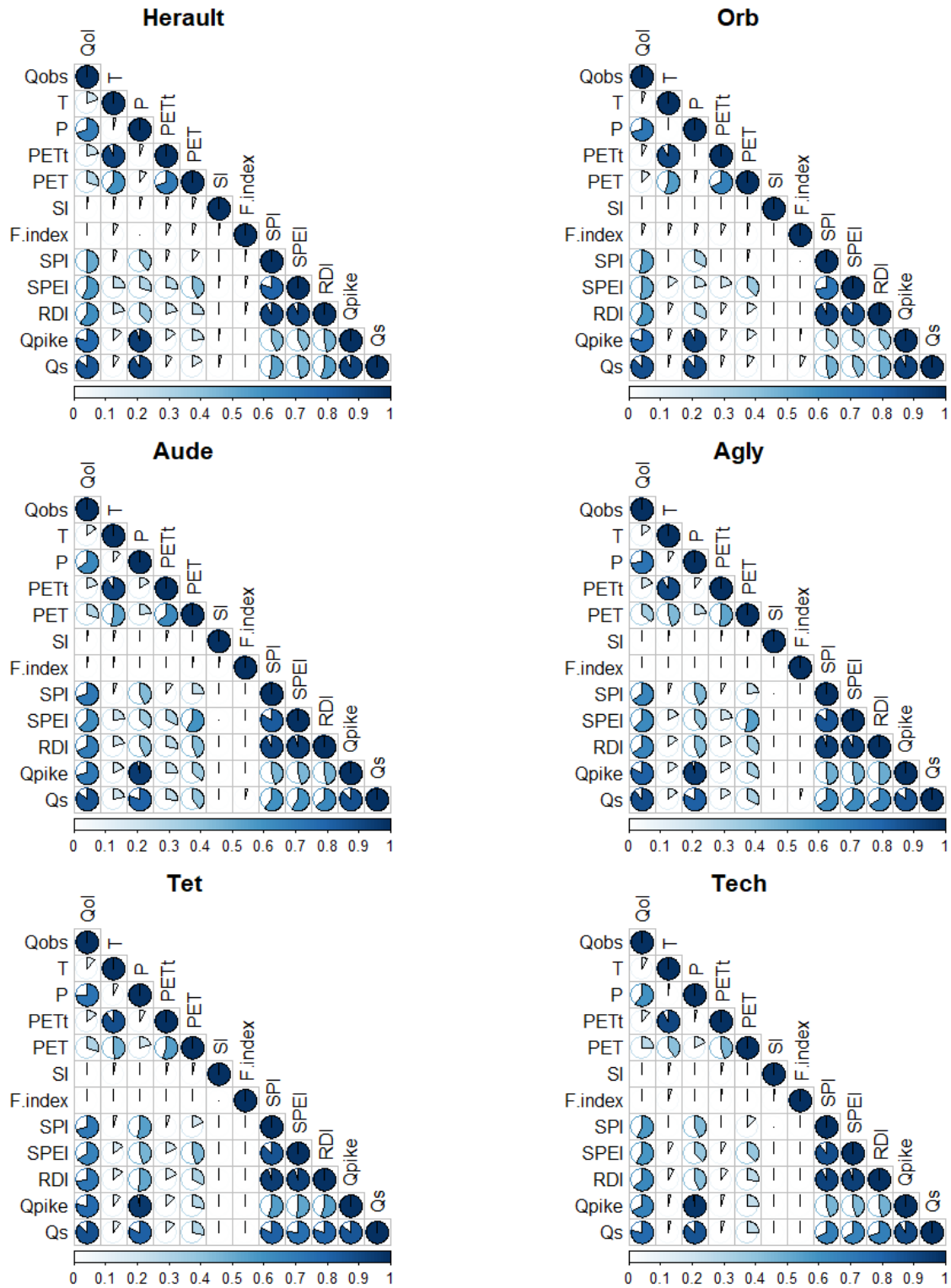


Figure S3. Correlation matrixes of hydro-climatic parameters for the six study catchments.

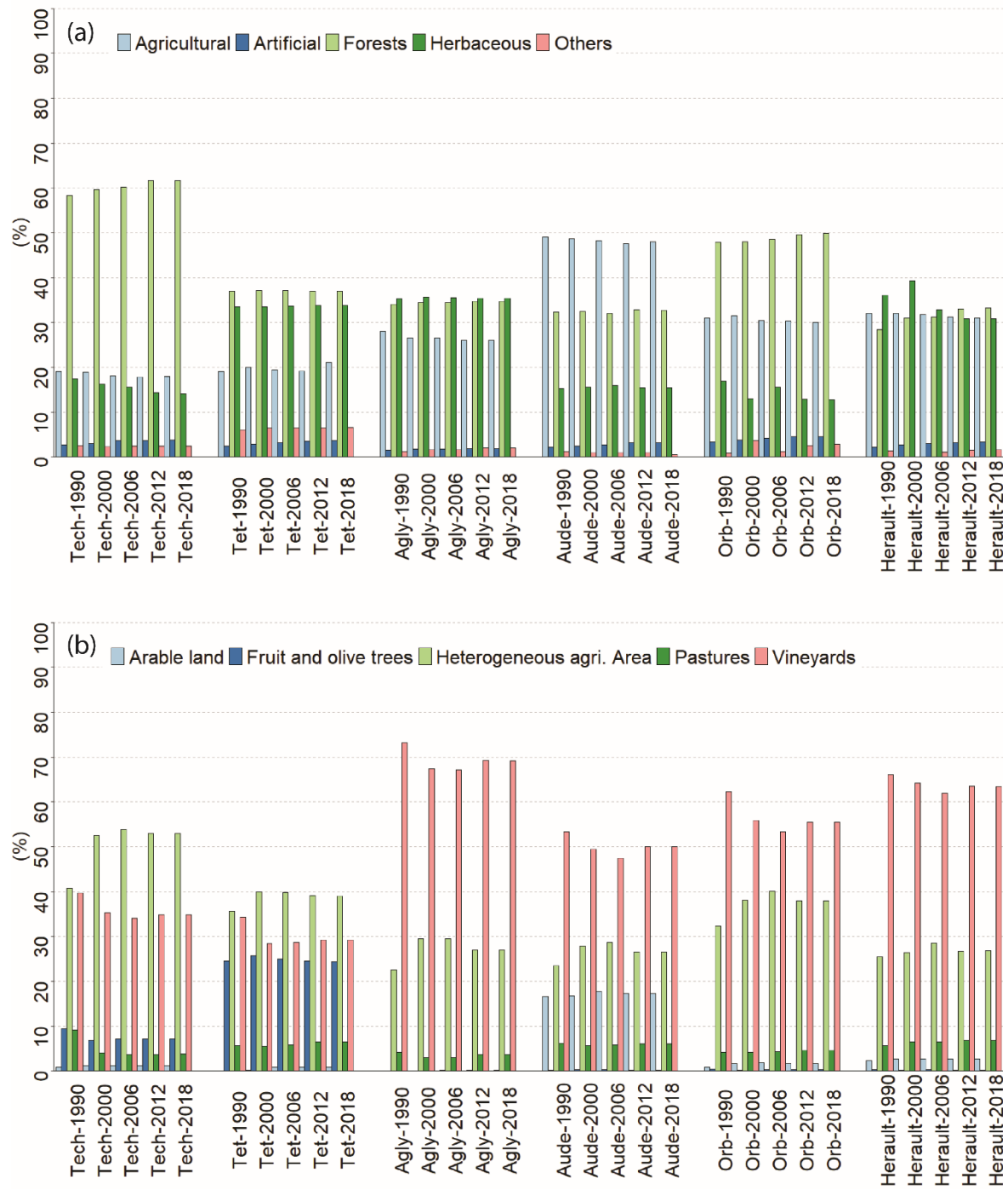


Figure S4. (a) Evolution of major land use types between 1990 and 2018; (b) evolution of agricultural land use types between 1990 and 2018.

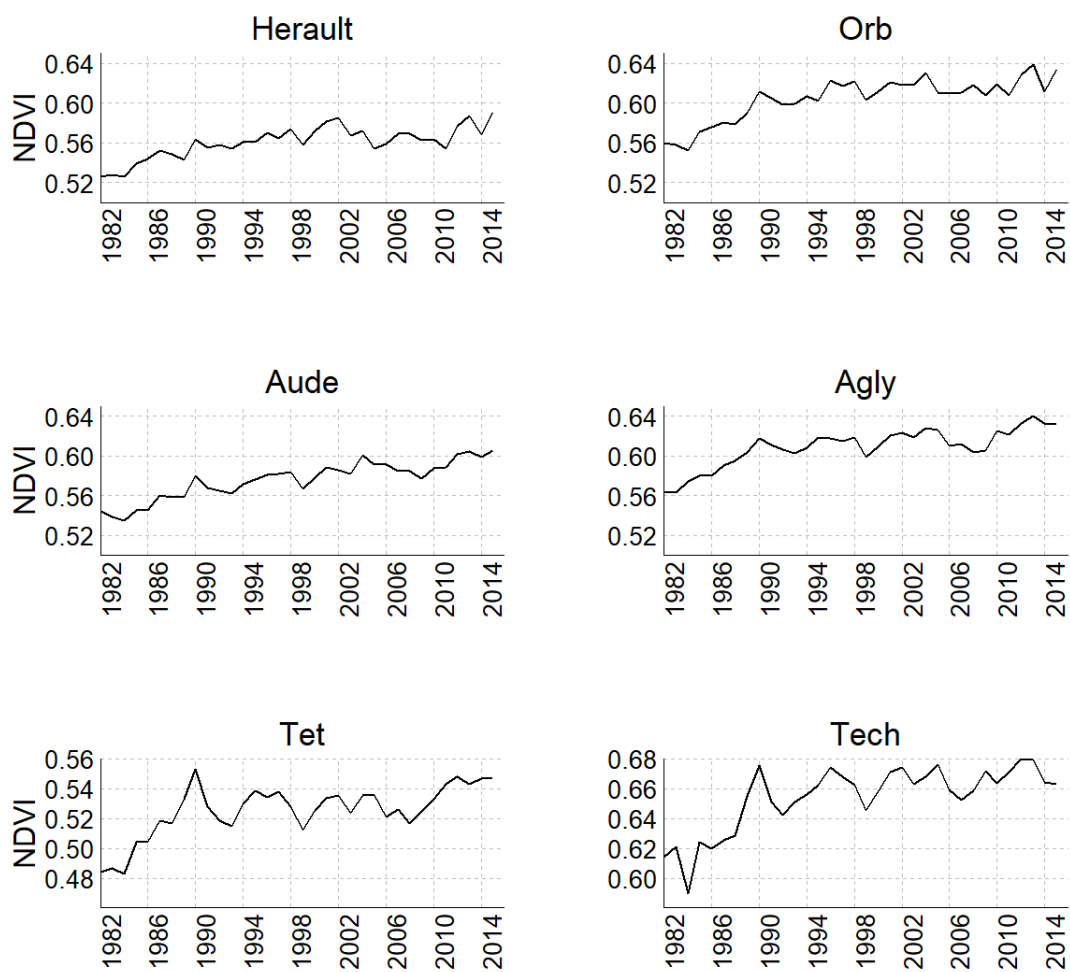


Figure S5. Evolution of average NDVI values in each basin from 1982 to 2015.