Supplement of Hydrol. Earth Syst. Sci., 30, 2059–2077, 2026
https://doi.org/10.5194/hess-30-2059-2026-supplement

Hydrology and Earth System Sciences
Open Access
EGU

Supplement of

Exploring controls on solute export mechanisms in anthropogenically impacted catchments in Southern Germany in climatically different periods

Sofia Frietsch and Tobias Schuetz

Correspondence to: Sofia Frietsch (frietsch@uni-trier.de)

Table S1: Overview about catchment characteristics including the categories Hydrological (Q_{mean}, Q_{median}, $log(Q_{mean})$, q – discharge per unit catchment area), Topography (altitude, A – catchment area), and soil characteristics (soil moisture). Soil moisture is calculated for Period 1 (P1), Period 2 (P2) and the whole observation period (all).

stream	Q_{median} [$m^3 s^{-1}$]	Q_{mean} [$m^3 s^{-1}$]	$log(Q_{mean})$ [$m^3 s^{-1}$]	A [km^2]	q [$L s^{-1} km^{-2}$]	altitude [m.a.s.l.]	soil moisture [% nFK]		
							P1	P2	all
Aisch	3.7	5.8	0.6	991	5.8	268	84.50	76.17	81.67
Kammel	2.2	2.7	0.4	251	10.6	548	93.67	88.58	91.92
Loisach	18.9	21.6	1.3	638	4.2	827	102.83	101.17	102.25
Naab	35.6	49.7	1.6	5434	9	449	91.58	85.58	89.58
Schwarzach	6.1	8.5	0.8	820	10.2	553	93.75	88.58	92.00
Tiroler Achen	27.9	35.8	1.5	945	37.8	613	100.17	97.58	99.25
Vils	7.4	11	1	1440	7.1	357	91.92	86.67	90.08
Alf	4	1.3	0.1	138	45.5	433	90.83	86.17	89.25
Alsenz	2.3	1.7	0.1	316	9.4	351	89.92	83.58	87.75
Appelbach	10.7	0.5	-0.2	170	84.2	148	84.75	77.17	82.08
Erlenbach	19.4	0.5	-0.2	97	240.5	173	86.17	78.17	83.42
Glan	19.3	10.1	0.8	1088	21.2	335	88.75	82.08	86.42
Hornbach	18.2	4.5	0.6	425	50.7	290	88.83	81.83	86.42
Nahe	20.1	29.8	1.3	4039	7.2	363	90.17	84.08	88.08
Nette	38	2	0.2	369	147.2	441	91.50	86.50	89.75
Pfrimm	32.5	0.8	-0.1	226	198.9	395	89.17	82.67	86.92
Queich	37.6	1.1	0	268	189	187	86.67	79.00	84.08
Ruwer	36.5	2.7	0.2	222	222.7	412	91.00	86.25	89.33
Selz	5.8	0.5	-0.3	363	27.5	226	86.58	79.33	84.08
Simmerbach	6.9	2.3	0.1	362	25.1	422	89.83	83.92	87.75
Speyerbach	6.3	1.8	0.2	312	29.3	293	88.58	81.58	86.17
Wiesbach	27.5	0.4	-0.2	197	177.6	187	85.08	77.58	82.50
Hahnenbach	27.3	1.7	0.1	255	144.8	345	89.42	83.50	87.33
Aar	27.9	1.4	0	243	144.1	254	86.92	80.00	84.50
Doersbach	28.7	0.7	-0.1	113	324.9	343	88.33	82.00	86.17
Enz	6.7	1.2	0.1	101	115.4	525	91.92	89.00	90.92
Schwarzbach	8.1	4.6	0.6	530	20.2	460	91.25	84.83	89.00
Brigach	8.3	1.9	0.1	101	115.1	835	99.33	94.58	97.67
Donau	1.6	9	0.7	827	4.6	827	99.50	94.58	97.83
Eger	0.8	1	0	107	12.8	514	92.00	86.08	90.00
Erms	0.4	3.2	0.4	159	3.4	393	91.50	85.17	89.33
Jagst	0.5	9.6	0.7	1030	2.7	508	91.50	85.33	89.33
Neckar	3.8	4.9	0.5	452	15.5	743	97.50	92.25	95.75
Rems	7	6.7	0.7	569	31.9	339	88.75	81.83	86.33
Schutter	1	0.6	-0.2	49	28.5	327	92.00	85.17	89.67
Tauber	0.6	8.9	0.8	1584	0.5	318	87.08	79.50	84.50
Fils	0.8	9.4	0.8	696	2	457	92.50	86.58	90.42
Kocher	0.8	22.3	1.2	1932	0.9	442	91.00	84.58	88.75
Wolfegger Ach	0.5	3	0.4	164	3.6	632	97.50	93.00	95.92
Breg	0.8	5.6	0.5	291	6.8	827	99.50	94.58	97.83

Table S2: Overview about catchment characteristics including the categories Land use (forest, pastures, arable land, urban area) and Geology (sediments, loess sediments, crystalline rock, sandstone, clay rock). Share of land use (%) is calculated for the year 2006 (representing Period 1) and the year 2018 (representing Period 2).

stream	carbonate rock [%]	sediments [%]	loess sedi-ments [%]	crystalline rock [%]	sandstone [%]	clay rock [%]	forest [%]		pastures [%]		arable land [%]		urban area [%]	
							2006	2018	2006	2018	2006	2018	2006	2018
Aisch	0	0	2	0	45	53	34	21	7	26	56	48	3	4
Kammel	0	4	92	0	0	0	36	34	27	32	32	28	5	6
Loisach	78	1	0	0	0	7	75	50	13	18	6	0	5	4
Naab	15	4	4	40	33	5	46	45	9	18	41	30	4	5
Schwarzach	0	0	0	100	0	0	41	40	13	29	44	28	2	3
Tiroler Achen	91	9	0	0	0	0	83	69	14	17	1	0	2	3
Vils	0	0	100	0	0	0	18	18	0	0	78	80	4	2
Alf	0	0	0	0	0	100	36	18	22	56	40	22	3	4
Alsenz	0	0	0	10	90	0	32	9	5	51	59	34	4	5
Appelbach	0	1	50	12	37	0	19	3	0	28	76	63	5	6
Erlenbach	0	23	51	0	26	0	31	25	8	15	55	51	6	9
Glan	0	0	0	8	86	2	36	14	15	54	40	20	9	11
Hornbach	3	0	0	0	10	87	24	3	10	50	57	34	9	13
Nahe	0	0	6	9	53	30	39	14	11	49	44	28	6	8
Nette	0	0	1	58	0	40	32	14	7	34	51	39	10	12
Pfrimm	23	10	20	0	47	0	20	4	2	25	73	63	5	8
Queich	0	19	12	0	68	0	68	46	8	33	17	12	7	9
Ruwer	0	0	0	0	1	99	57	34	14	49	26	13	3	4
Selz	0	0	98	0	2	0	1	0	0	2	91	89	8	9
Simmerbach	0	0	0	0	14	86	39	22	14	38	44	36	2	4
Speyerbach	0	3	0	0	97	0	95	77	0	20	2	0	3	3
Wiesbach	0	0	64	10	26	0	20	2	0	21	74	70	5	7
Hahnenbach	0	0	0	0	0	100	45	25	15	40	36	30	4	5
Aar	0	0	0	0	0	100	49	7	5	56	44	33	2	4
Doersbach	0	0	0	0	0	100	42	10	10	49	47	38	2	3
Enz	0	0	0	0	4	96	34	14	29	58	36	26	1	2
Schwarzbach	0	0	0	0	65	35	61	32	5	46	27	14	7	8
Brigach	0	0	8	59	33	0	52	54	31	32	4	0	13	13
Donau	29	0	5	28	14	24	48	42	20	34	25	15	7	8
Eger	23	0	5	0	1	71	23	16	15	25	56	52	6	7
Erms	2	98	0	0	0	0	33	0	2	41	48	40	16	19
Jagst	39	0	31	0	0	31	29	15	16	37	52	43	4	5
Neckar	25	0	21	0	16	38	34	34	14	32	41	20	11	13
Rems	50	0	3	0	0	46	38	20	12	38	35	26	14	16
Schutter	0	0	0	72	28	0	68	56	24	43	9	1	0	0
Tauber	66	0	24	0	2	8	20	8	3	28	74	84	3	5
Fils	59	0	0	0	0	41	36	6	13	55	40	28	12	12
Kocher	40	0	27	0	0	33	37	23	14	36	43	34	6	7
Wolfegger Ach	0	100	0	0	0	0	34	27	52	60	10	6	3	4
Breg	12	0	2	59	20	8	63	63	20	25	12	7	4	4

Table S3: Overview about catchment climatic characteristics including precipitation (P), evapotranspiration (ET), potential evapotranspiration (PET), evaporative index (ET/P), and aridity index (PET/P) calculated for Period 1 (P1), Period 2 (P2) and the whole observation period (all).

stream	P [mm]			ET [mm]			PET [mm]			ET/P [-]			PET/P [-]			dMI [mm °C^{-1}]		
	P1	P2	all	P1	P2	all	P2	P1	all	P1	P2	all	P1	P2	all	P1	P2	all
Aisch	679	597.6	657.2	450.3	462	454.3	724.6	602.4	644.4	0.7	0.8	0.7	0.9	1.2	1	2.84	2.22	2.68
Kammel	915.8	849.9	898.2	483.3	523.9	497.3	688.3	583.5	619.5	0.5	0.6	0.6	0.6	0.8	0.7	3.89	3.33	3.74
Loisach	1371.9	1297.6	1352	498.7	572	523.9	625.4	534.5	565.7	0.4	0.4	0.4	0.4	0.5	0.4	7.04	6.12	6.79
Naab	833.3	706.9	799.4	456.3	485.6	466.4	669.5	564.6	600.7	0.6	0.7	0.6	0.7	1	0.8	4.11	2.98	3.80
Schwarzach	901.2	798.5	873.7	450.1	484.7	462	644.9	544.5	579	0.5	0.6	0.5	0.6	0.8	0.7	4.78	3.58	4.45
TirolerAchen	1623.6	1521.1	1596.1	498.6	568.9	522.8	662.5	558.7	594.4	0.3	0.4	0.3	0.3	0.4	0.4	8.43	7.28	8.12
Vils	889.4	792.6	863.4	484.1	525.5	498.3	701.6	599.6	634.6	0.5	0.7	0.6	0.7	0.9	0.7	4.18	3.23	3.93
Alf	903	786.2	871.6	440	452.7	444.4	657.7	560.7	594.1	0.5	0.6	0.5	0.6	0.8	0.7	4.33	3.36	4.07
Alsenz	739.1	714.6	732.5	450	472.4	457.7	695.2	578.5	618.6	0.6	0.7	0.6	0.8	1	0.9	3.15	2.76	3.04
Appelbach	543.3	483.2	527.1	459.1	475.2	464.6	759.2	625.1	671.2	0.9	1	0.9	1.2	1.6	1.3	1.88	1.48	1.77
Erlenbach	783.8	731.7	769.8	472.8	497.1	481.2	772.4	632.7	680.7	0.6	0.7	0.6	0.8	1.1	0.9	3.11	2.60	2.98
Glan	847.7	784.8	830.8	461.1	482.2	468.3	723.7	600.4	642.8	0.5	0.6	0.6	0.7	0.9	0.8	3.68	3.11	3.53
Hornbach	905.3	809.1	879.5	469.4	493.7	477.7	737.9	609.9	653.9	0.5	0.6	0.5	0.7	0.9	0.7	3.99	3.16	3.77
Nahe	851.9	794.2	836.4	450.2	470.3	457.1	691.1	577.8	616.7	0.5	0.6	0.6	0.7	0.9	0.7	3.86	3.28	3.70
Nette	852.5	765.1	829	433.4	445.9	437.7	642.7	548.7	581	0.5	0.6	0.5	0.7	0.9	0.7	3.98	3.26	3.78
Pfrimm	705.8	666	695.1	448.4	470	455.8	700.2	581.6	622.4	0.7	0.8	0.7	0.9	1.2	1	3.08	2.61	2.96
Queich	803.9	795.2	801.6	469.9	493.7	478.1	760.3	624.3	671.1	0.6	0.6	0.6	0.8	1	0.8	3.28	2.99	3.20
Ruwer	996.3	910	973.2	454.1	471.8	460.2	681.6	576.7	612.7	0.5	0.5	0.5	0.6	0.8	0.6	4.63	3.96	4.45
Selz	636.6	576.1	620.4	450.1	468.4	456.4	729.1	601.7	645.5	0.7	0.8	0.7	1	1.3	1	2.48	2.02	2.36
Simmerbach	697.2	613.1	674.6	442.6	459.3	448.3	681	571.7	609.3	0.6	0.8	0.7	0.8	1.1	0.9	2.93	2.32	2.77
Speyerbach	815.5	718.6	789.5	459.7	483.1	467.7	725	599.1	642.4	0.6	0.7	0.6	0.7	1	0.8	3.48	2.76	3.28
Wiesbach	540	491.5	527	455.7	471.9	461.3	750.9	618.6	664.1	0.9	1	0.9	1.2	1.5	1.3	1.89	1.57	1.81
Hahnenbach	768.2	655.8	738	446.2	462.6	451.8	691.2	578.8	617.5	0.6	0.7	0.6	0.8	1.1	0.8	3.36	2.54	3.14
Aar	645.3	554.9	621.1	441.7	457.3	447.1	709.6	589.9	631	0.7	0.8	0.7	0.9	1.3	1	2.58	1.97	2.42
Doersbach	739.1	640.9	712.7	439.4	455.1	444.8	690.5	577.4	616.3	0.6	0.7	0.6	0.8	1.1	0.9	3.15	2.45	2.96
Enz	930.8	767.8	887.1	442	451.4	445.2	635.8	553.3	581.7	0.5	0.6	0.5	0.6	0.8	0.7	4.50	3.24	4.16
Schwarzbach	958.8	866.7	934.1	457.7	484.2	466.8	694.5	578.7	618.5	0.5	0.6	0.5	0.6	0.8	0.7	4.53	3.68	4.31
Brigach	1454.8	1364.7	1430.6	457.9	509.5	475.6	623.6	518.1	554.4	0.3	0.4	0.3	0.4	0.5	0.4	8.32	7.22	8.02
Donau	1229.6	1169.6	1213.5	463.6	518.5	482.4	631.6	521.6	559.4	0.4	0.5	0.4	0.5	0.6	0.5	6.97	6.26	6.78
Eger	872.4	764.8	843.5	461	492.7	471.9	677.1	569.9	606.7	0.5	0.6	0.6	0.7	0.9	0.7	4.10	3.13	3.84
Erms	903	807.1	877.3	472.3	508.6	484.8	708.9	591.1	631.6	0.5	0.6	0.6	0.7	0.9	0.7	3.74	2.98	3.53
Jagst	878.1	770.7	849.3	459	489.4	469.5	681.1	571.4	609.1	0.5	0.6	0.6	0.7	0.9	0.7	4.11	3.21	3.87
Neckar	972.5	897.6	952.4	465.9	516.6	483.4	651.9	540.4	578.7	0.5	0.6	0.5	0.6	0.7	0.6	4.94	4.10	4.72
Rems	929.4	870.6	913.6	471.9	500	481.6	728.2	606.9	648.6	0.5	0.6	0.5	0.7	0.8	0.7	3.93	3.41	3.79
Schutter	1213.3	1114.9	1186.9	481.3	526	496.7	739.7	601.6	649.1	0.4	0.5	0.4	0.5	0.7	0.6	5.18	4.56	5.01
Tauber	721.8	636.3	698.9	452.5	473.8	459.8	717.3	592.7	635.5	0.6	0.8	0.7	0.8	1.1	0.9	3.06	2.38	2.88
Fils	1052.3	931.1	1019.8	466.7	502	478.9	687.1	576.4	614.5	0.5	0.6	0.5	0.6	0.8	0.6	4.83	3.99	4.60
Kocher	929.6	831.6	903.3	460.4	490.3	470.7	690.8	578	616.8	0.5	0.6	0.5	0.6	0.8	0.7	4.29	3.52	4.08
Wolfegger Ach	1242	1052.6	1191.2	490.8	547.5	510.3	673.9	566.3	603.3	0.4	0.5	0.4	0.5	0.6	0.5	5.93	4.51	5.54
Breg	1229.6	1169.6	1213.5	463.6	518.5	482.4	631.6	521.6	559.4	0.4	0.5	0.4	0.5	0.6	0.5	6.97	6.26	6.78

Table S4: Overview about general SEM pattern for NH_4-N, SRP, TP, TOC, NO^3-N, Ca^{2+} and Mg^{2+}. Data comprises CV_C/CV_Q values (CV) and computed cQ-slopes (cQ) for the whole observation time attributed to each stream.

Stream	NH_4-N		SRP		TP		TOC		NO_3-N		Ca^{2+}		Mg^{2+}	
	CV	cQ	CV	cQ	CV	cQ	CV	cQ	CV	cQ	CV	cQ	CV	cQ
Aar	1.06	0.54	0.39	-0.41	0.35	-0.22	0.38	0.10	0.22	0.22	0.26	-0.40	0.18	-0.27
Aisch	0.57	0.43	0.31	-0.03	0.23	0.03	0.31	0.23	0.23	0.21	0.12	-0.15	0.11	-0.14
Alf	0.67	0.07	0.58	-0.49	0.47	-0.33	0.34	0.15	0.30	0.26	0.28	-0.21	0.21	-0.24
Alsenz	1.76	0.42	0.36	-0.28	0.47	-0.13	0.49	0.25	0.24	0.21	0.11	-0.10	0.13	-0.14
Appelbach	3.58	0.20	0.67	-0.30	1.07	-0.13	1.83	0.29	0.36	0.15	0.23	-0.16	0.29	-0.19
Breg	0.63	0.17	0.31	-0.08					0.14	0.01	0.19	-0.21	0.23	-0.10
Brigach	2.05	0.22	0.61	-0.32	0.27	0.10			0.34	-0.31	0.34	-0.30	0.29	-0.35
Doersbach	1.50	0.33	0.60	-0.45	0.57	-0.33	0.55	0.07	0.33	0.25	0.14	-0.15	0.13	-0.13
Donau	0.58	0.13	0.45	0.06	0.41	0.09	0.22	-0.11	0.12	0.02	0.11	-0.01	0.13	-0.05
Eger	1.10	0.15	0.55	0.24	0.90	0.86			0.35	0.31	0.10	-0.16	0.12	-0.16
Enz	0.49	0.23	0.44	-0.25	0.63	0.02	0.73	0.28	0.19	0.12	0.23	-0.23	0.19	-0.21
Erlenbach	1.54	0.32	0.76	0.03	0.59	0.20	0.50	0.29	0.34	-0.02	0.22	-0.11	0.23	-0.15
Erms	3.97	-0.15	2.38	-0.55	0.48	-0.37	1.23	0.49	0.31	-0.09	0.10	-0.01	0.44	-0.13
Fils	1.47	0.07	0.80	-0.38	0.69	-0.01	0.53	0.18	0.29	-0.14	0.10	-0.08	0.21	-0.19
Glan	1.13	0.61	0.30	-0.42	0.25	-0.21	0.23	0.17	0.17	0.07	0.10	-0.09	0.10	-0.06
Hahnenbach	1.14	0.26	0.77	-0.40	0.64	-0.23	0.28	0.08	0.36	0.35	0.11	-0.04	0.11	-0.06
Hornbach	0.66	0.40	0.48	-0.17	0.34	0.08	0.54	0.43	0.33	0.16	0.14	0.09	0.15	0.02
Jagst	0.81	0.32	0.35	0.13	0.33	0.17	0.27	0.17	0.40	0.56	0.13	-0.17	0.12	-0.15
Kammel	1.43	0.76	0.42	-0.04	0.75	0.33	0.72	0.54	0.21	0.02	0.16	-0.25	0.20	-0.38
Kocher	0.71	0.35	0.42	0.00	0.34	0.10	0.39	0.25	0.25	0.25	0.17	-0.23	0.16	-0.20
Loisach	1.79	-0.44	1.92	-0.33	1.73	0.35	0.88	0.39	0.31	-0.22	0.17	-0.18	0.19	-0.22
Naab	1.30	0.50	0.83	-0.21	0.64	0.02	0.40	0.24	0.31	0.26	0.20	-0.25	0.29	-0.38
Nahe	0.91	0.06	0.39	-0.42	0.35	-0.33	0.14	-0.16	0.18	0.04	0.15	-0.19	0.16	0.06
Neckar	1.07	0.20	0.57	-0.39	0.47	-0.33	0.38	0.22	0.19	-0.17	0.17	-0.21	0.19	-0.25
Nette	1.15	0.39	0.66	-0.80	0.73	-0.30	0.54	-0.13	0.25	-0.04	0.44	-0.53	0.34	-0.36
Pfrimm	2.14	0.67	0.64	0.09	0.74	0.28	0.55	0.42	0.25	-0.19	0.18	-0.18	0.19	-0.21
Queich	1.62	0.76	0.65	-0.23	0.57	0.04	0.47	0.12	0.43	0.03	0.28	-0.22	0.21	-0.08
Rems	1.49	0.19	0.66	-0.20	0.47	0.23			0.23	-0.08	0.20	-0.25	0.25	-0.35
Ruwer	0.95	-0.09	0.61	-0.50	0.88	-0.33	0.35	0.05	0.20	0.15	0.14	-0.13	0.11	-0.11
Schutter	1.38	0.14	0.50	0.10					0.20	0.07	0.18	-0.27	0.38	-0.48
Schwarzach	1.03	0.41	0.50	-0.17	0.50	-0.06	0.39	0.07	0.39	0.32	0.08	0.02	0.08	-0.03
Schwarzbach	1.29	0.30	0.71	-0.17	0.68	0.15	1.16	0.61	0.49	0.21	0.22	0.15	0.22	0.12
Selz	2.84	0.61	0.62	-0.13	0.69	-0.20	0.47	0.08	0.59	0.30	0.28	-0.03	0.44	0.08
Simmerbach	1.50	0.50	0.43	-0.43	0.59	-0.28	0.24	0.13	0.30	0.30	0.09	-0.06	0.08	-0.06
Speyerbach	3.35	0.36	1.09	-0.01	0.91	0.02	0.79	0.34	0.63	0.00	0.73	0.35	0.71	0.43
Tauber	1.12	0.49	0.40	-0.24	0.48	-0.15			0.20	0.16	0.14	-0.17	0.11	-0.10
TirolerAchen	1.03	-0.29	1.26	-0.43	2.40	0.53	1.43	0.47	0.27	-0.18	0.19	-0.22	0.20	-0.24
Vils	0.91	0.76	0.56	0.33	0.50	0.35	0.44	0.34	0.35	0.39	0.11	-0.10	0.13	-0.22
Wiesbach	1.43	-0.30	0.28	-0.14	0.84	-0.34	0.70	0.23	0.44	-0.05	0.31	-0.10	0.42	-0.13
Wolfegger Ach	1.68	0.60	0.75	0.40	0.58	0.94			0.21	-0.07	0.18	-0.15	0.21	-0.28

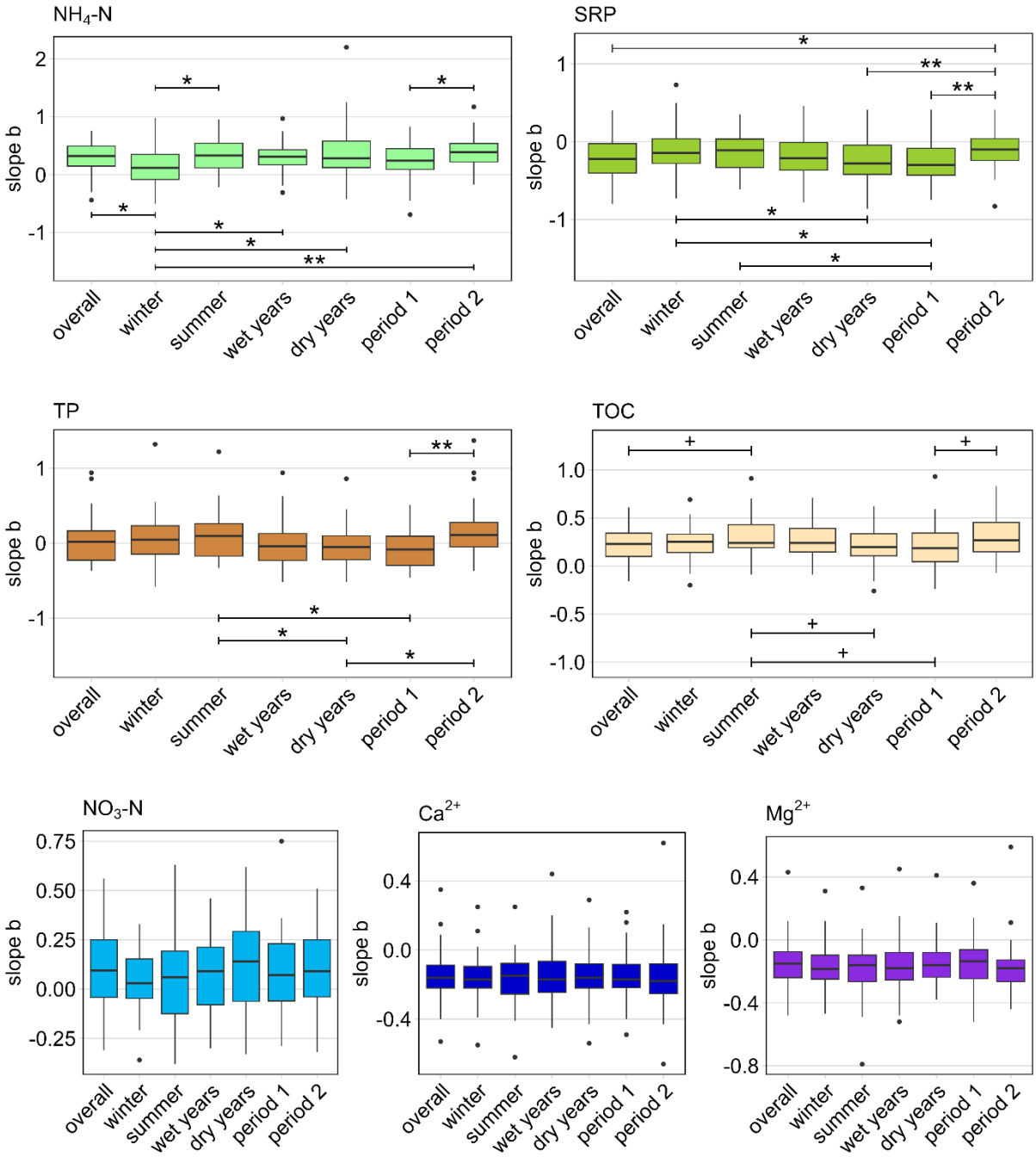

Figure S1: Boxplots of slope b for NH_4-N, SRP, TP, TOC, NO_3-N and Ca^{2+} (Ca) across different periods (overall, winter, summer, wet years, dry years, period 1, period 2). Significant differences were tested using the Kruskal-Wallis test and corrected by Bonferroni correction ($^{+}$<0.1, *<0.05, **<0.01).

Table S5: Relationships between land-use changes from 2006 to 2018 and changes in cQ-relationship (Δ slope b) for multiple water quality parameters. Correlation analyses were performed using the Pearson or Spearman method, depending on the distribution of the variables. Pearson correlations were applied exclusively when variables satisfied normality requirements. Normality was evaluated using the Shapiro–Wilk test ($p > 0.05$). Correlation coefficients, p-values, and sample sizes (n) are documented. Negative values indicate a decrease in cQ-slope or land-use share, while positive values indicate an increase.

Parameter	Landuse	slope b	Method	Correlation coefficient	p-value	n
NO3	Δ Forest [%]	Δ slope b - NO_3	pearson	0.00	0.980	35
NO3	Δ Pastures [%]	Δ slope b - NO_3	pearson	0.05	0.794	35
NO3	Δ Arable Land [%]	Δ slope b - NO_3	pearson	0.04	0.841	35
NO3	Δ Urban Area [%]	Δ slope b - NO_3	spearman	-0.14	0.419	35
NH4	Δ Forest [%]	Δ slope b - NH_4	spearman	0.06	0.734	35
NH4	Δ Pastures [%]	Δ slope b - NH_4	spearman	-0.16	0.353	35
NH4	Δ Arable Land [%]	Δ slope b - NH_4	spearman	0.29	0.087	35
NH4	Δ Urban Area [%]	Δ slope b - NH_4	spearman	-0.28	0.101	35
Pges	Δ Forest [%]	Δ slope b - TP	spearman	-0.24	0.228	27
Pges	Δ Pastures [%]	Δ slope b - TP	spearman	0.15	0.455	27
Pges	Δ Arable Land [%]	Δ slope b - TP	spearman	-0.09	0.645	27
Pges	Δ Urban Area [%]	Δ slope b - TP	spearman	-0.23	0.250	27
oP	Δ Forest [%]	Δ slope b - SRP	pearson	-0.39	0.019	35
oP	Δ Pastures [%]	Δ slope b - SRP	pearson	0.24	0.164	35
oP	Δ Arable Land [%]	Δ slope b - SRP	pearson	-0.03	0.859	35
oP	Δ Urban Area [%]	Δ slope b - SRP	spearman	-0.04	0.832	35
Ca	Δ Forest [%]	Δ slope b - Ca^{2+}	spearman	-0.02	0.924	30
Ca	Δ Pastures [%]	Δ slope b - Ca^{2+}	spearman	-0.08	0.694	30
Ca	Δ Arable Land [%]	Δ slope b - Ca^{2+}	spearman	0.26	0.172	30
Ca	Δ Urban Area [%]	Δ slope b - Ca^{2+}	spearman	-0.44	0.015	30
Mg	Δ Forest [%]	Δ slope b - Mg^{2+}	pearson	0.11	0.577	30
Mg	Δ Pastures [%]	Δ slope b - Mg^{2+}	pearson	-0.20	0.285	30
Mg	Δ Arable Land [%]	Δ slope b - Mg^{2+}	pearson	0.27	0.145	30
Mg	Δ Urban Area [%]	Δ slope b - Mg^{2+}	spearman	-0.66	0.000	30
TOC	Δ Forest [%]	Δ slope b - TOC	pearson	-0.27	0.185	26
TOC	Δ Pastures [%]	Δ slope b - TOC	pearson	0.22	0.286	26
TOC	Δ Arable Land [%]	Δ slope b - TOC	pearson	-0.20	0.338	26
TOC	Δ Urban Area [%]	Δ slope b - TOC	spearman	-0.02	0.916	26