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*Supplement of*

## **Land cover effects on hydrologic services under a precipitation gradient**

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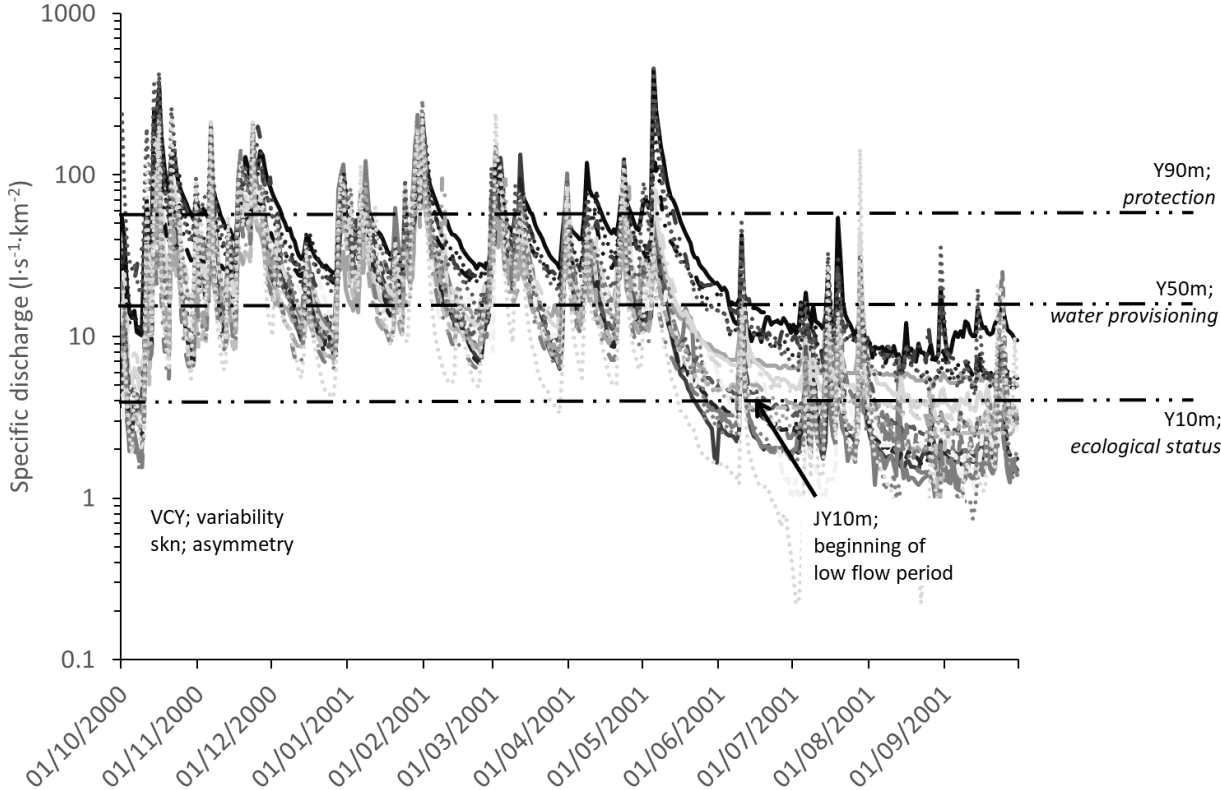
## Supplementary material

**Figure S1:** Hydrographs for the 20 catchments in Table 1 for the hydrological year 2000–2001. The meaning of some of the calculated hydrological indicators is also indicated in the figure.

**Figure S2:** Boxplots representing the statistics of a) annual and b) seasonal precipitation for the 20 studied catchments during the hydrological years considered. A = Autumn, W = Winter, Sp = Spring and Sm = Summer.

**Figure S3:** Linear regressions obtained between a) annual precipitation (YP, mm) and runoff (YR, mm) b) precipitation from spring and winter (SpP + WP) and average discharge in spring (Sp50m) c) precipitation from winter and autumn (WP + AP) and wintertime high flows (W90m) and d) precipitation from spring and winter (SpP + WP) and low flows in spring (Sp10m).

**Figure S1**



**Figure S1:** Hydrographs for the 20 catchments in Table 1 for the hydrological year 2000–2001. The meaning of some of the calculated hydrological indicators is also indicated in the figure.

Figure S2

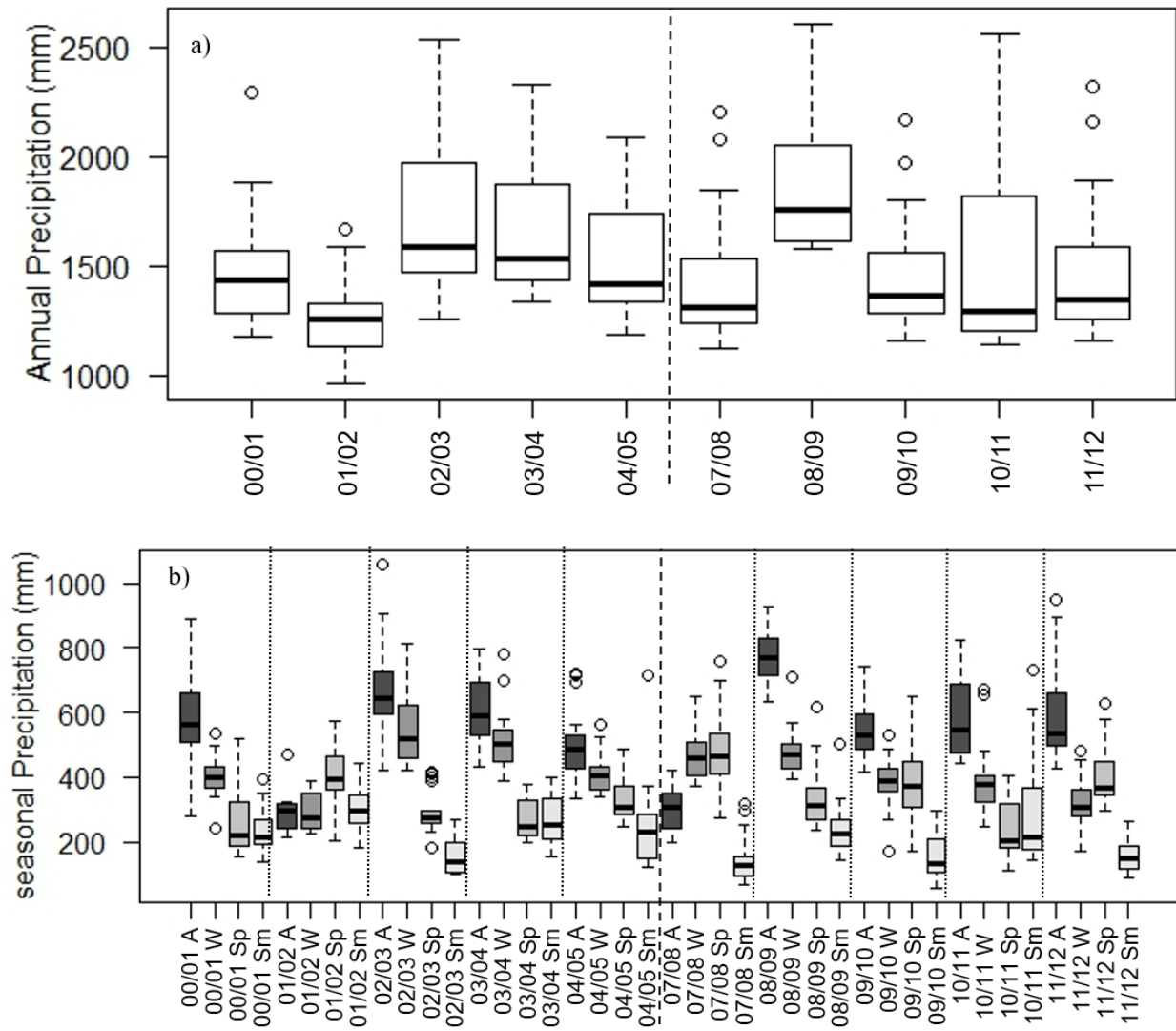
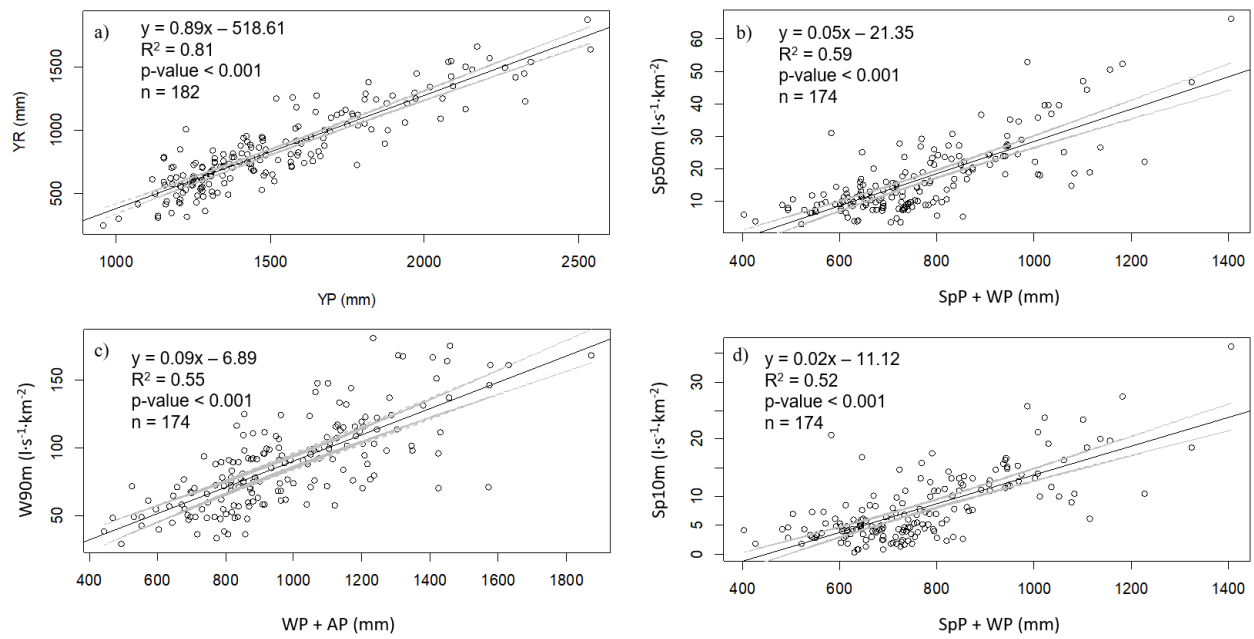


Figure S2: Boxplots representing the statistics of a) annual and b) seasonal precipitation for the 20 studied catchments during the hydrological years considered. A = Autumn, W = Winter, Sp = Spring and Sm = Summer.

**Figure S3**



**Figure S3:** Linear regressions obtained between a) annual precipitation (YP, mm) and runoff (YR, mm) b) precipitation from spring and winter (SpP + WP) and average discharge in spring (Sp50m) c) precipitation from winter and autumn (WP + AP) and wintertime high flows (W90m) and d) precipitation from spring and winter (SpP + WP) and low flows in spring (Sp10m).

**Table S1: Multiple regression models.**

a) Multiple regression model for annual average flows (Y50m) considering alternative land cover and its interaction with annual precipitation (YP).

	Estimate	Std. Error	t value	p value	Significance
(Intercept)	50.67649	21.3388	2.3749	0.01862	*
YP	-0.02049	0.0150	-1.3635	0.17446	
Native	-0.80268	0.2677	-2.9985	0.00310	**
Exotic	-0.56718	0.2329	-2.4354	0.01586	*
Pasturelands	-0.81356	0.2181	-3.7296	0.00026	***
I(Native * YP)	0.00046	0.0002	2.6403	0.00902	**
I(Exotic *YP)	0.00030	0.0002	1.8558	0.06513	.
I(Pasturelands * YP)	0.00057	0.0002	3.4285	0.00075	***

Significance codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 3.96 on 178 degrees of freedom

Multiple R-squared: 0.7791, Adjusted R-squared: 0.7704

F-statistic: 89.69 on 7 and 178 DF, p-value: < 2.2e-16

b) Multiple regression model for average discharge for spring (Sp50m) considering alternative land cover and its interaction with seasonal precipitation (spring + winter precipitation, SpPt).

	Estimate	Std. Error	t value	p value	Significance
(Intercept)	84.01452	43.1914	1.9452	0.05345	.
SpPt (SpP+WP)	-0.06791	0.0586	-1.1585	0.24833	
Native	-1.44268	0.5367	-2.6879	0.00792	**
Exotic	-0.86076	0.5230	-1.6457	0.10172	
Pasturelands	-0.98659	0.3952	-2.4965	0.01352	*
I(Native * SpPt)	0.00159	0.0007	2.3249	0.02129	*
I(Exotic *SpPt)	0.00083	0.0007	1.1590	0.24811	
I(Pasturelands * SpPt)	0.00127	0.0006	2.2893	0.02332	*

Significance codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 6.784 on 166 degrees of freedom

Multiple R-squared: 0.6407, Adjusted R-squared: 0.6256

F-statistic: 42.29 on 7 and 166 DF, p-value: < 2.2e-16

c) Multiple regression model for annual high flows (Y90m) considering alternative land cover and its interaction with annual precipitation (YP).

	Estimate	Std. Error	t value	p value	Significance
(Intercept)	-2.86E+02	1.06E+02	-2.707	0.007451	**
YP	2.46E-01	7.31E-02	3.364	0.000941	***

Native	2.88E+00	1.14E+00	2.5281	0.01234	*
Exotic	2.02E+00	1.14E+00	1.766	0.079105	.
Pasturelands	3.44E+00	1.19E+00	2.8874	0.004367	**
I(Native * YP)	-2.07E-03	7.54E-04	-2.7403	0.006764	**
I(Exotic *YP)	-1.54E-03	7.85E-04	-1.9637	0.051117	.
I(Pasturelands * YP)	-2.45E-03	8.50E-04	-2.8772	0.004503	**

Significance codes: 0 '\*\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 13.5 on 178 degrees of freedom

Multiple R-squared: 0.6837, Adjusted R-squared: 0.6713

F-statistic: 54.97 on 7 and 178 DF, p-value: < 2.2e-16

d) Multiple regression model for low flows for spring (Sp10m) considering alternative land cover and its interaction with seasonal precipitation (spring + winter precipitation, SpPt).

	Estimate	Std. Error	t value	p value	Significance
(Intercept)	65.57420	33.1084	1.9806	0.04929	*
SpPt (SpP+WP)	-0.06361	0.0458	-1.3876	0.16712	
Native	-0.99263	0.3915	-2.5358	0.01214	*
Exotic	-0.65681	0.3678	-1.7858	0.07596	.
Pasturelands	-0.80725	0.3327	-2.4266	0.01631	*
I(Native * SpPt)	0.00109	0.0005	2.1315	0.03452	*
I(Exotic *SpPt)	0.00070	0.0005	1.3761	0.17065	
I(Pasturelands * SpPt)	0.00108	0.0005	2.2733	0.02429	*

Significance codes: 0 '\*\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 3.955 on 166 degrees of freedom

Multiple R-squared: 0.5759, Adjusted R-squared: 0.558

F-statistic: 32.2 on 7 and 166 DF, p-value: < 2.2e-16