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Supplement of

Proximate and ultimate controls on carbon and nutrient dynamics of small agricultural catchments

Z. Thomas et al.

Correspondence to: Z. Thomas (zthomas@agrocampus-ouest.fr)

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Figures and table:

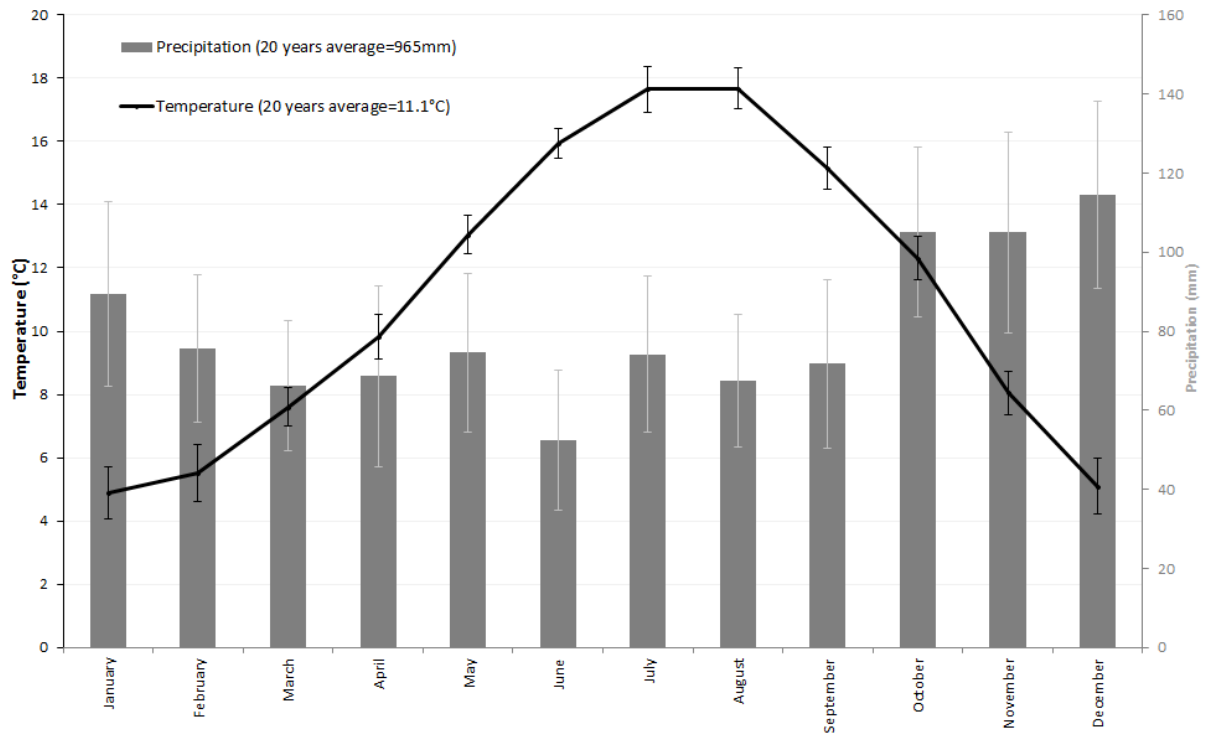


Figure S1. Ombrothermic diagram presenting 20 years data from September 1994 to august 2014.

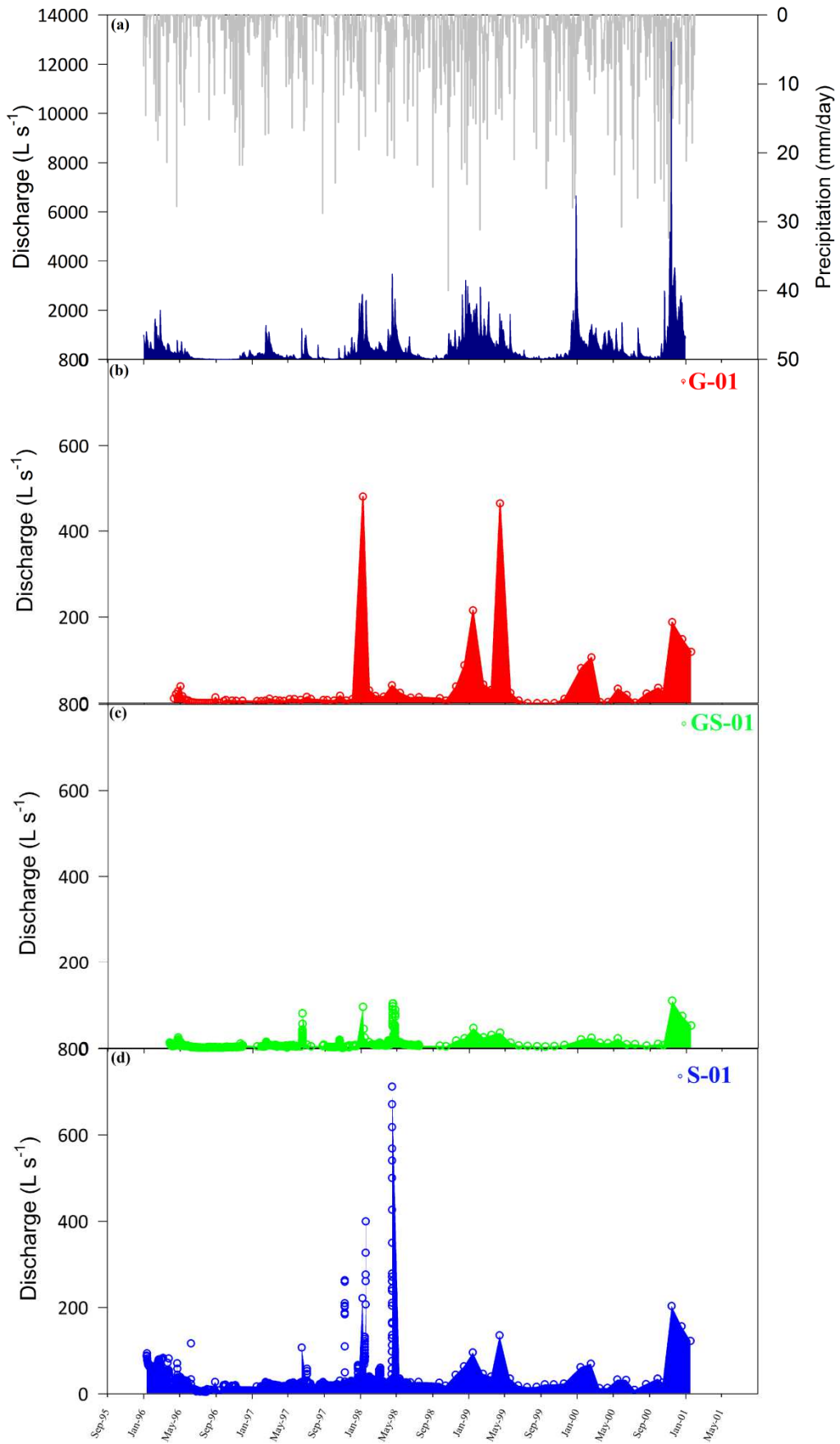


Figure S2. Discharge measured at the gaged station Le Guyoult (a) and at the monitored catchments G-01 (b), GS-01(c) and S-01(d).

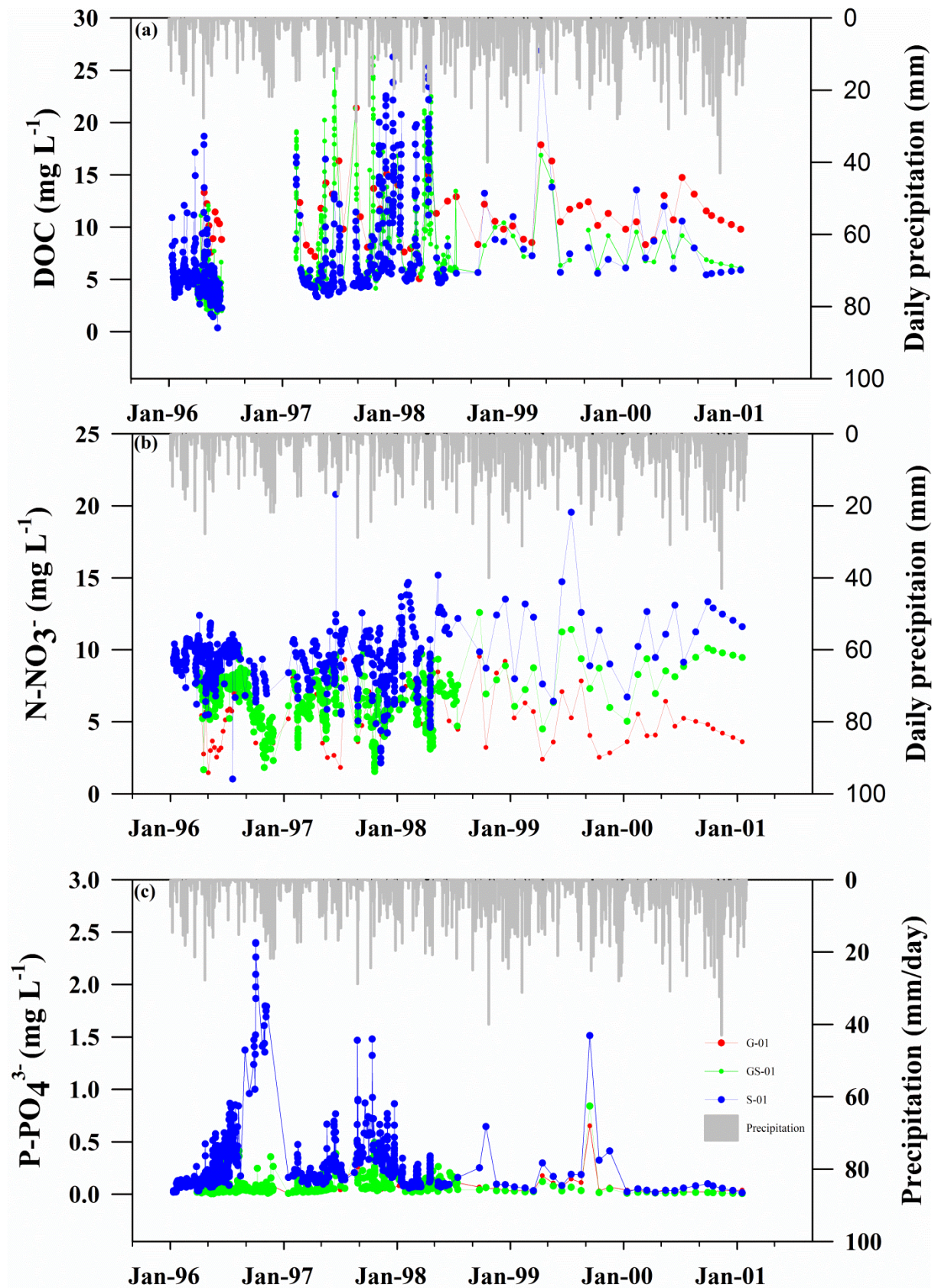


Figure S3. High and low frequency data of dissolved organic carbon, nitrate, and phosphate in stream water measured at the outlet of catchments G-01, GS-01 and S-01.

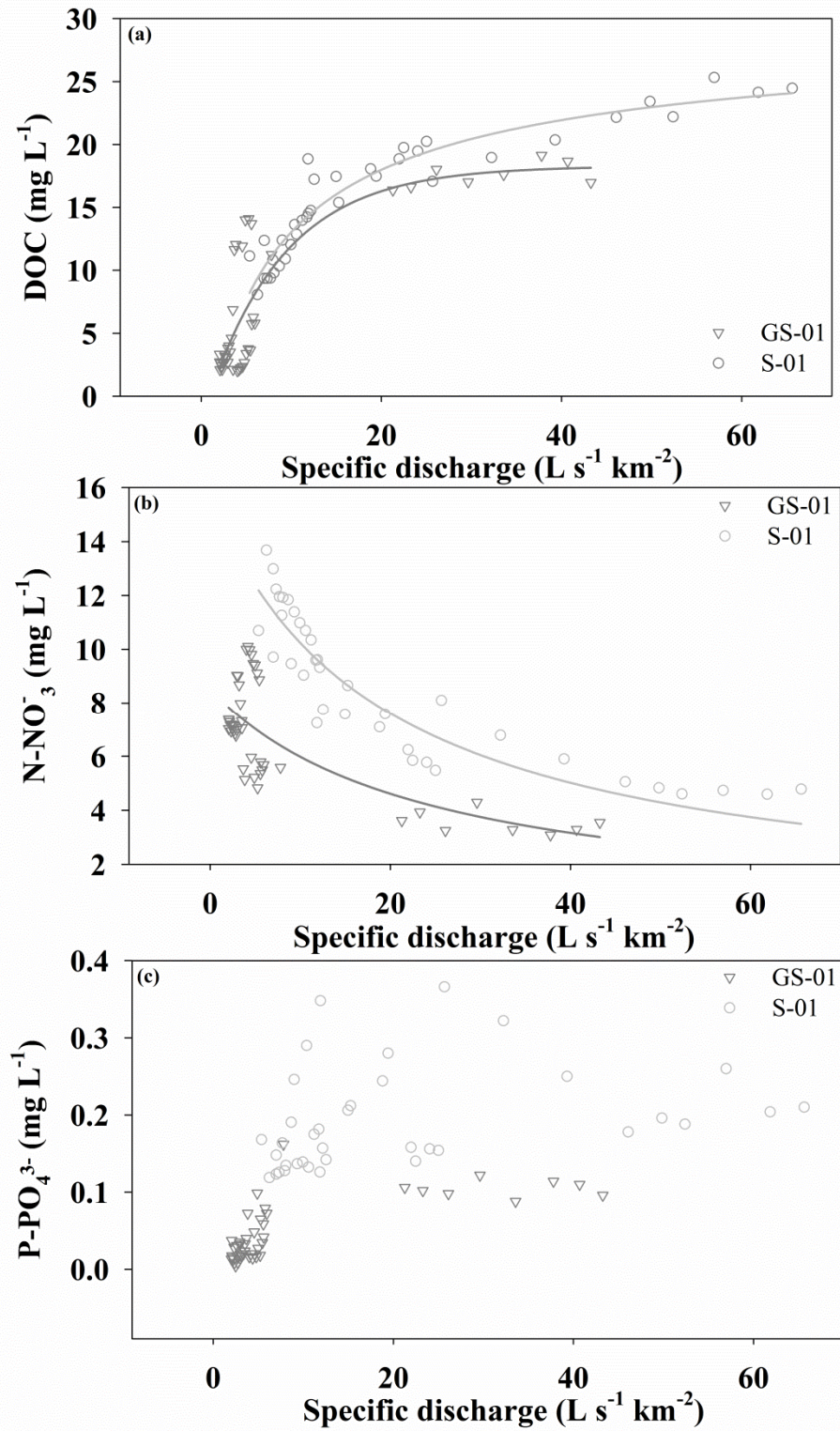


Figure S4. Relationships between dissolved organic carbon, nitrate, and phosphate and specific discharge during storm events.

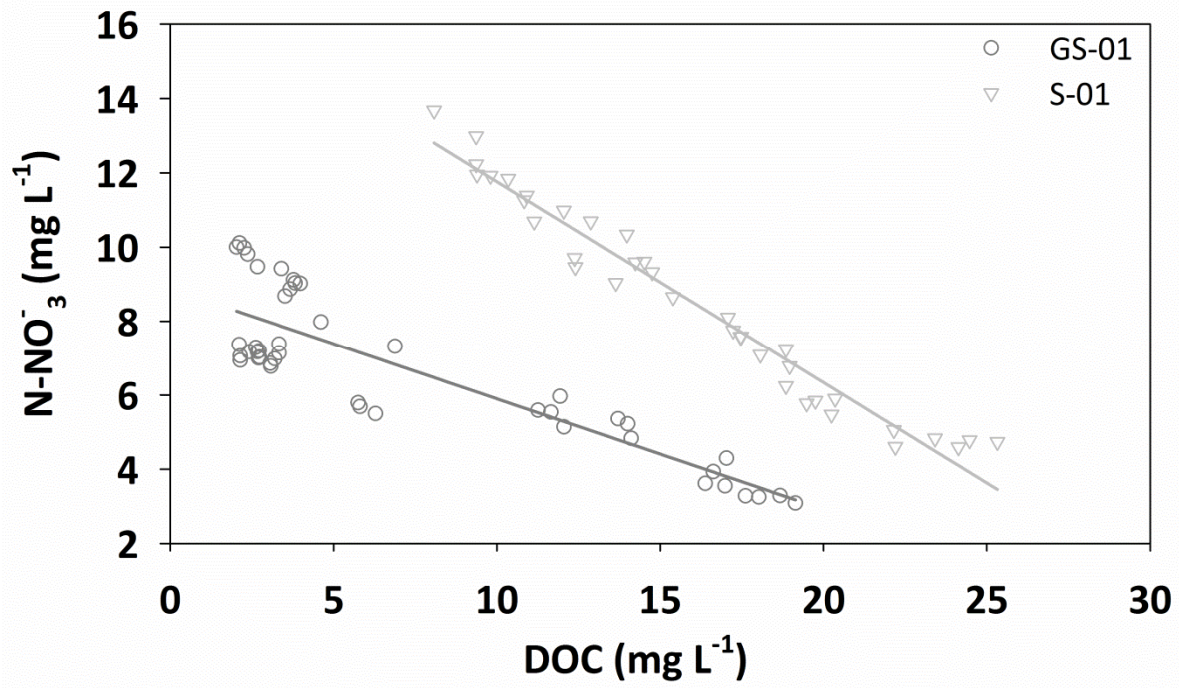
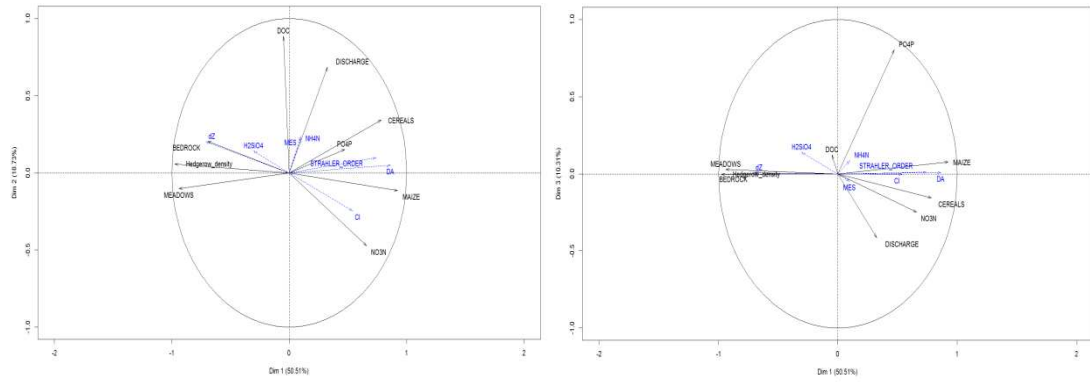


Figure S5. Inverse relationship between DOC and NO₃⁻ concentration during discharge events for the catchment GS-01 (○) and S-01 (▽).



Individuals factor map (PCA)

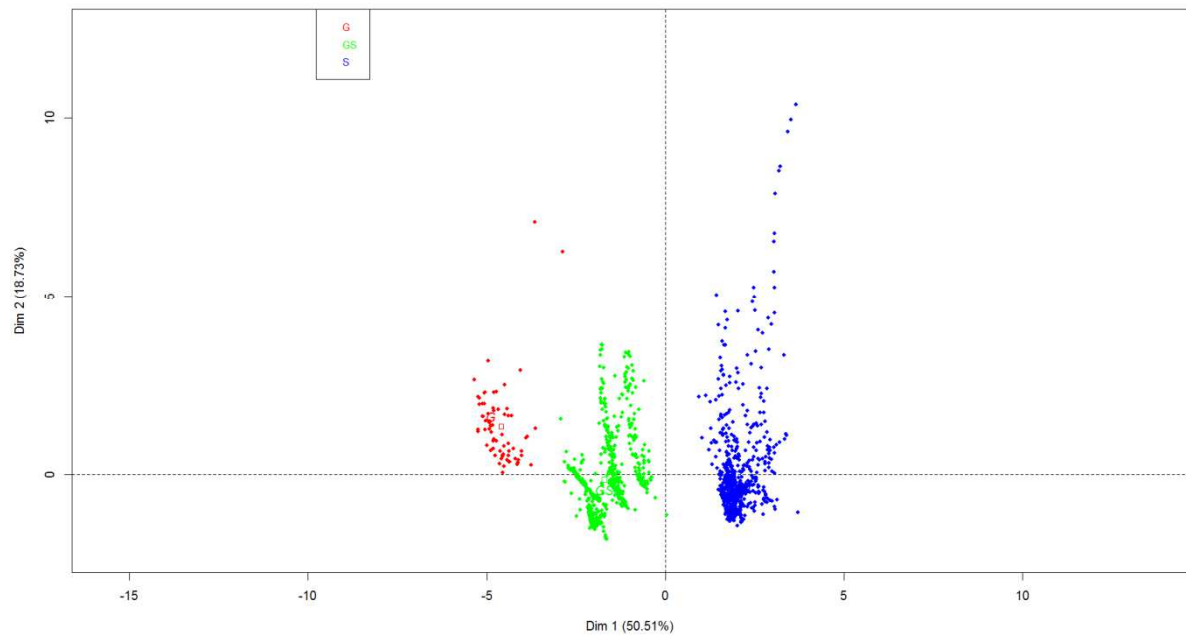


Figure S6. Principal component analysis of the major sources of variability in water chemistry for catchments G-01 (red), GS-01 (green), and S-01 (blue). Together, the first-three axes explain 80% of the total variability of the data.

	Year 1	Year 2	Year 3	Year 4	Year 5
Hydrological years	Sept 95- Aug.96	Sept 96- Aug.97	Sept 97- Aug.98	Sept 98- Aug.99	Sept 98- Aug.00
Annual precipitation (mm)	786.4	794.6	819.2	1131.6	1174.4
Difference in annual precipitation with average of 20 years (mm)	-178.6	-170.4	-145.8	166.6	209.4

Table S1. Annual precipitation over the studied period compared with average conditions based on the 20 year average from 1994-2014.