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## Supplement of

## Hydrological controls on temporal contributions of three nested forested subcatchments to the export of dissolved organic carbon

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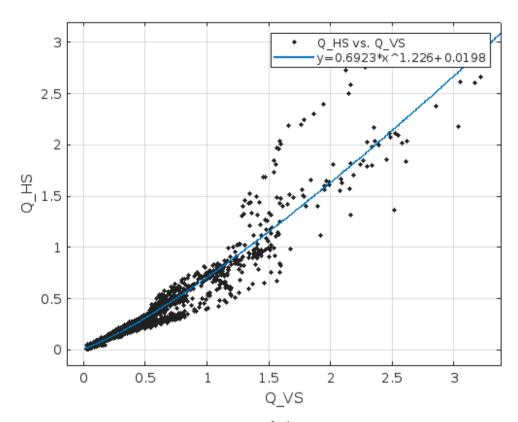


Figure S1: Relationship between the discharge (in  $m^3$  s<sup>-1</sup>) of the catchment Vorderer Schachtenbach (Q\_VS) and the catchment Hinterer Schachtenbach (Q\_HS), which was used for the gap filling of missing discharge data at Hinterer Schachtenbach from August 1<sup>st</sup> to September 3<sup>rd</sup>, 2020 (R<sup>2</sup> = 0.94). The relationship was established using data from August 2019 to July 2020.

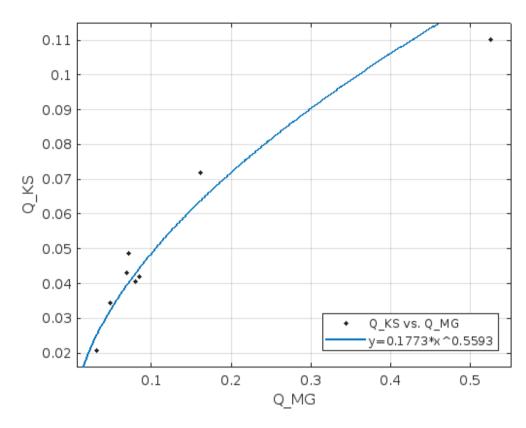


Figure S2: Relationship of discharge (in  $m^3$  s<sup>-1</sup>) at MG (Q\_MG) and KS (Q\_KS), which was measured at KS via tracer dilution on eight occasions between April and December 2021 ( $R^2 = 0.95$ ).

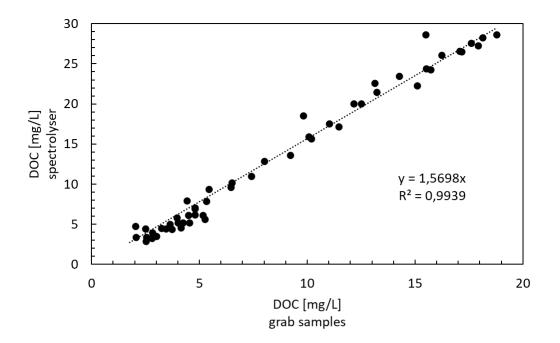


Figure S3: Correction factor used for the DOC concentrations measurements made by UV-Vis spectrophotometer D1 using grab stream samples at various discharge conditions (n = 52).

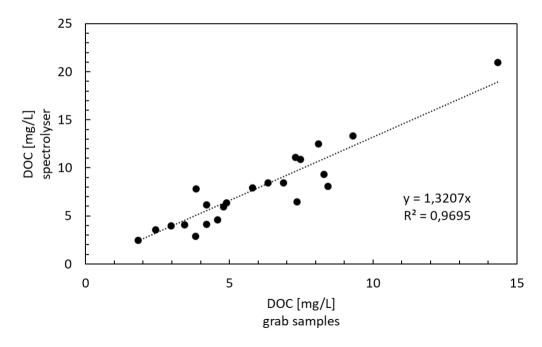
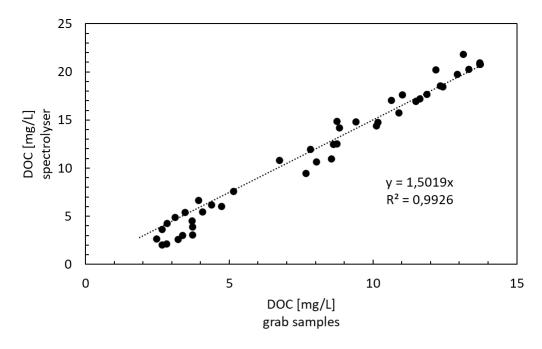


Figure S4: Correction factor used for the DOC concentrations measurements made by UV-Vis spectrophotometer D2 using grab stream samples at various discharge conditions (n = 22).

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25 Figure S5: Correction factor used for the DOC concentrations measurements made by UV-Vis spectrophotometer D3 using grab stream samples at various discharge conditions (n =44).

Table S1: Percentages of total time, total runoff generated and total DOC export for the catchment  $HS_{tot}$  per hydrological period.

	%time	%runoff	%DOC export
Spring	17	22	26
Summer	24	12	11
Autumn	16	14	21
Winter	17	9	4
Snowmelt	26	43	38

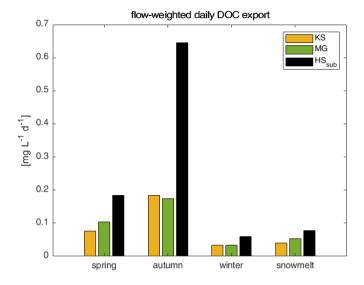


Figure S6: Mean daily flow-weighted DOC export from the subcatchments KS, MG and HS<sub>sub</sub> during the different hydrological periods.