Supplement of Biogeosciences Discuss., 12, 9005–9041, 2015
http://www.biogeosciences-discuss.net/12/9005/2015/
doi:10.5194/bgd-12-9005-2015-supplement

Biogeosciences
Discussions
Open Access

Supplement of

Map-based prediction of organic carbon in headwaters streams improved by downstream observations from the river outlet

J. Temnerud et al.

Correspondence to: J. Temnerud (johan.temnerud@slu.se)

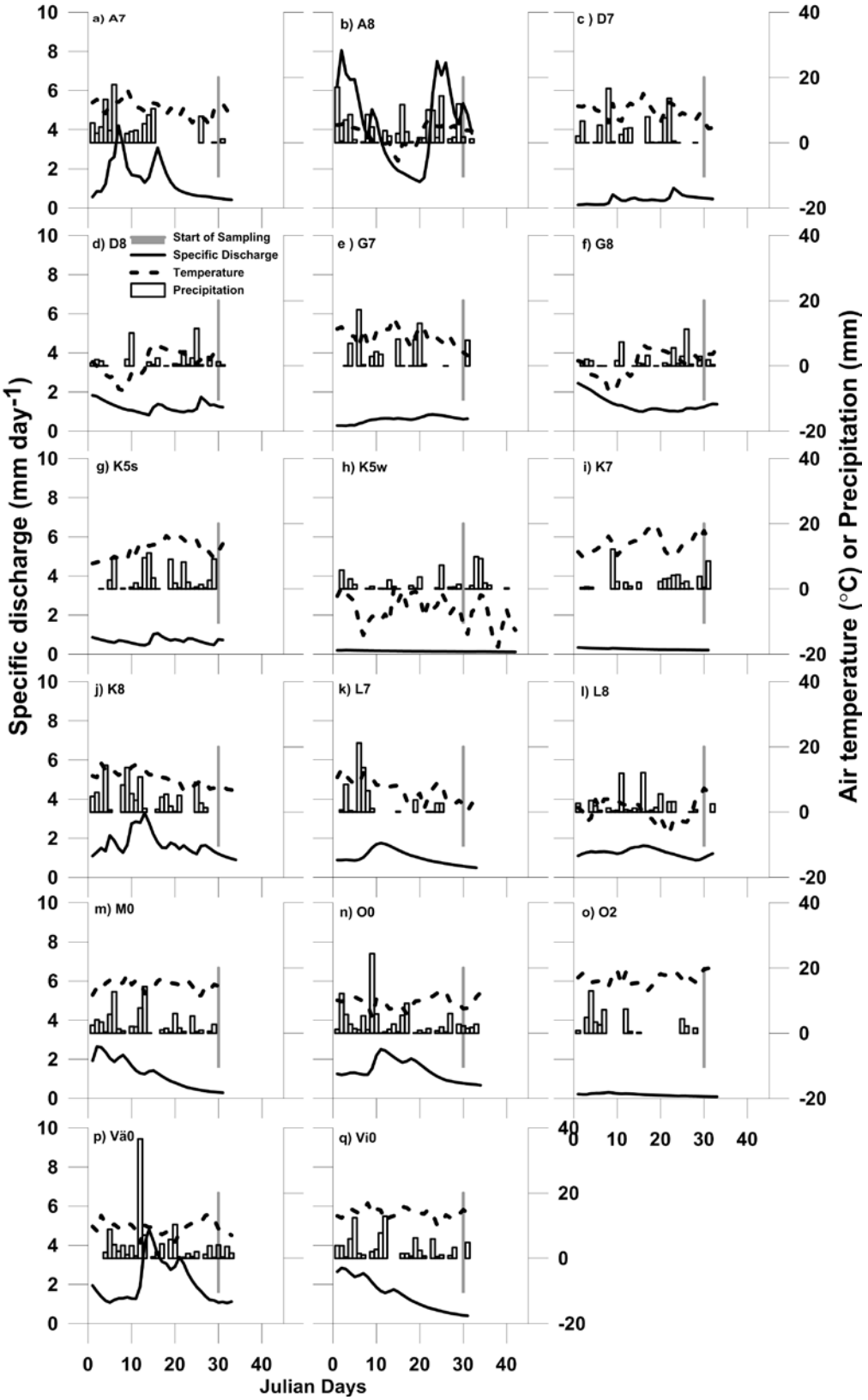

Fig. S1. Modelled daily specific discharge, daily mean air temperature, and daily total precipitation for each catchment, the outlet, for the 30 days prior to the respective sampling. Start of sampling is indicated by the grey vertical line. a) is sampling A7, b) is A8, c) is D7, d) is D8, e) is G7, f) is G8, g) is K5s, h) is K5w, i) is K7, j) is K8, k) is L7, l) is L8, m) is M0, n) is O0, o) is O2, p) is Vä0 and q) is Vi0. See the Methods section for more details.

Table S1. Median values for headwater (HW) catchments, and the value for the entire mesoscale catchment as defined by the outlet (Out). Data includes elevation (Elev) median and interquartile range (IQR), proportion of land-use (CORINE), tree stand data (kNN), and proportion of soil and surficial geology type. See Table 1 for river names. For CORINE classes a short-name was given, for details see: http://www.eea.europa.eu/publications/COR0-landcover. Index B is *Betula spp*., S is Norway spruce (*Picea abies*), P is Scots pine (*Pinus sylvestris*), and the unit for tree classes are m^3 ha^{-1}. Tree age is the age of the forest stand (years) and Tree height is the average height of the forest.

River	A	A	D	D	G	G	K	K	L	L	M	M	O	O	Vä	Vä	Vi	Vi
Group	HW	Out	HW	Out	HW	Out	HW	Out	HW	Out	HW	Out	HW	Out	HW	Out	HW	Out
Elev median (m a.s.l.)	122	109	244	212	314	269	277	244	235	220	409	375	251	235	408	366	443	411
Elev IQR	25	50	36	60	20	38	35	91	23	37	64	116	29	42	48	96	54	97
CORINE																		
Agricultural		0.09		0.01		0.00		0.02	0.05	0.06		0.00		0.02		0.00		0.00
Pasture	0.01	0.04		0.00		0.00		0.00	0.03	0.04	0.00	0.00		0.01	0.00	0.01		0.00
Broad-leaved forest	0.01	0.07	0.02	0.02		0.01	0.01	0.02	0.04	0.04	0.02	0.02	0.01	0.02	0.06	0.05	0.04	0.04
Coniferous forest	0.62	0.53	0.65	0.62	0.57	0.58	0.65	0.65	0.61	0.59	0.71	0.70	0.49	0.49	0.56	0.56	0.67	0.64
Mixed forest	0.09	0.10	0.09	0.08	0.04	0.06	0.07	0.08	0.05	0.05	0.04	0.04	0.06	0.08	0.11	0.08	0.08	0.08
Clear-felled	0.06	0.06	0.13	0.14	0.22	0.19	0.09	0.13	0.08	0.09	0.08	0.09	0.13	0.16	0.10	0.13	0.08	0.11
Wet mires	0.03	0.02		0.02	0.04	0.04	0.03	0.02		0.01	0.08	0.08	0.03	0.05	0.09	0.09	0.08	0.08
Broad-leaved forest on mires		0.00		0.00		0.00	0.00	0.00		0.00		0.00	0.01	0.01	0.01	0.01	0.00	0.00
Coniferous forest on mires	0.02	0.02	0.02	0.03	0.01	0.02	0.08	0.05	0.04	0.04	0.03	0.03	0.13	0.12	0.03	0.04	0.02	0.02
Mixed forest on mires		0.00		0.00		0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.01	0.00	0.00		0.00
Lake surface	0.05	0.07		0.07		0.10		0.01	0.04	0.09	0.02	0.03	0.01	0.04		0.01		0.03
kNN data																		
Tree age (year)	39	35	48	44	42	39	53	53	41	38	35	35	46	47	38	42	33	36
Tree height (m)	11	10	12	11	9	9	9	9	12	11	9	9	8	8	7	7	9	8
$Birch^B$ (m3/ha)	17	18	12	12	8	8	13	12	14	14	13	13	14	14	14	13	13	12
$Pine^P$ (m3/ha)	42	39	64	60	59	60	49	50	41	40	29	30	30	29	20	26	28	33
Other Trees (m3/ha)	3	5	3	3	2	2	1	1	4	4	3	3	1	1	2	2	3	2
$Spruce^S$ (m3/ha)	66	59	64	58	34	35	36	32	92	86	49	50	42	40	25	28	38	38
Total Tree (m3/ha)	127	117	148	131	107	103	95	95	152	142	92	94	85	82	61	68	83	84
Soil type																		
Peat		0.01		0.03				0.01		0.01		0.04	0.01	0.16		0.05		0.05
Clay		0.12								0.02				0.08				
Coarse		0.00		0.02				0.26										
Glaciofluvial		0.02						0.12		0.03		0.04		0.00		0.01		0.02
Till			0.83	0.82	1.00	1.00	0.64	0.46	0.60	0.57	0.85	0.83	0.80	0.67	0.97	0.91	0.95	0.84
Bare rock	1.00	0.85	0.13	0.13			0.10	0.14	0.37	0.34	0.09	0.09		0.07		0.02		0.08
Diabase											0.14	0.19					0.06	0.19
Granite	1.00	0.74	1.00	0.54	1.00	0.99		0.03	0.50	0.49				0.14	0.94	0.58		
Mafic gabbro										0.11								
Gneiss		0.26									0.86	0.80					0.94	0.81
Acid volcanics				0.44		0.01			0.21	0.37		0.01						
Mafic volcanics							0.04	0.06							0.05	0.14		

Slate		0.95	0.90		0.99	0.86	0.28
Limestone	0.02						