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Supplement of

Climate or land cover variations: what is driving observed changes in river peak flows? A data-based attribution study

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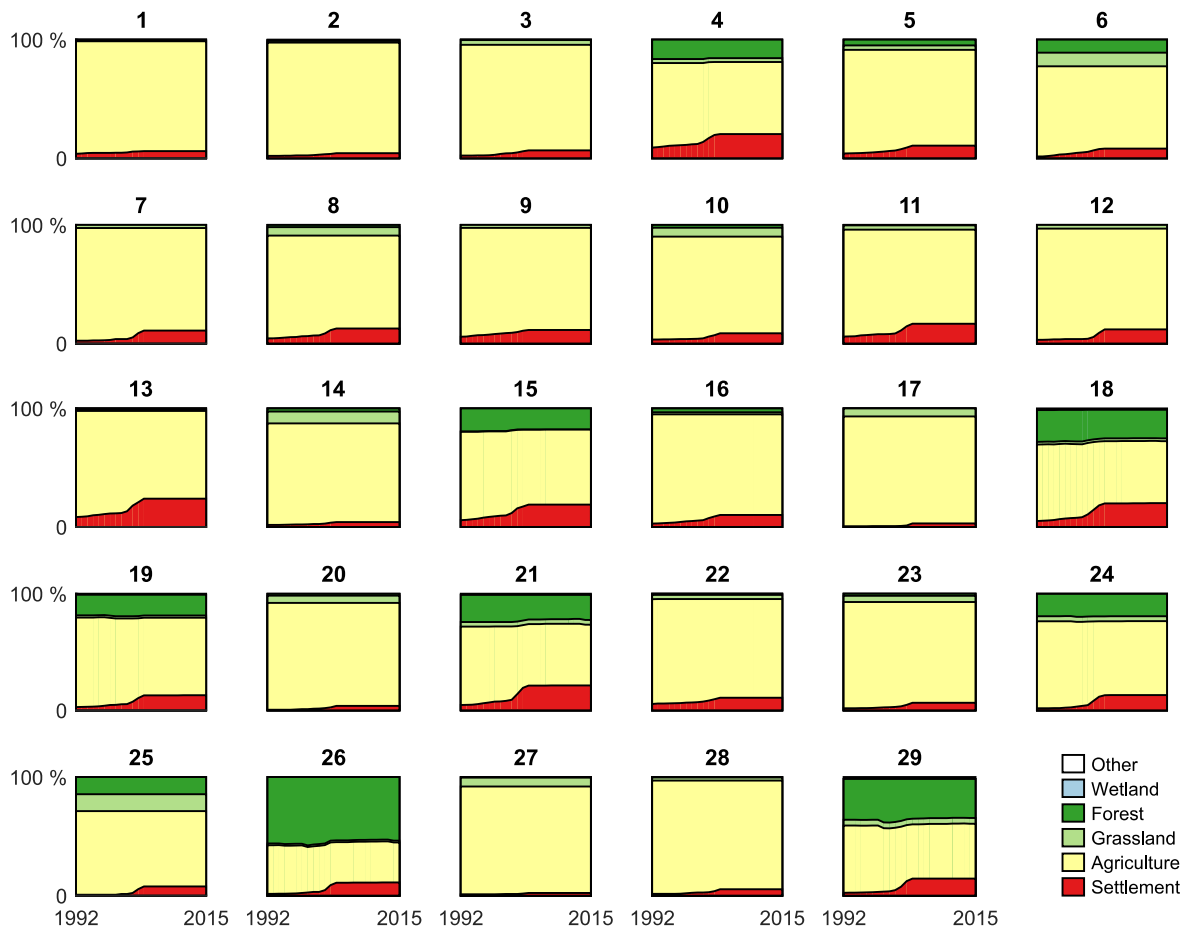


Figure S1. Land cover and land cover changes over time (1992 – 2015) for the selected catchments.

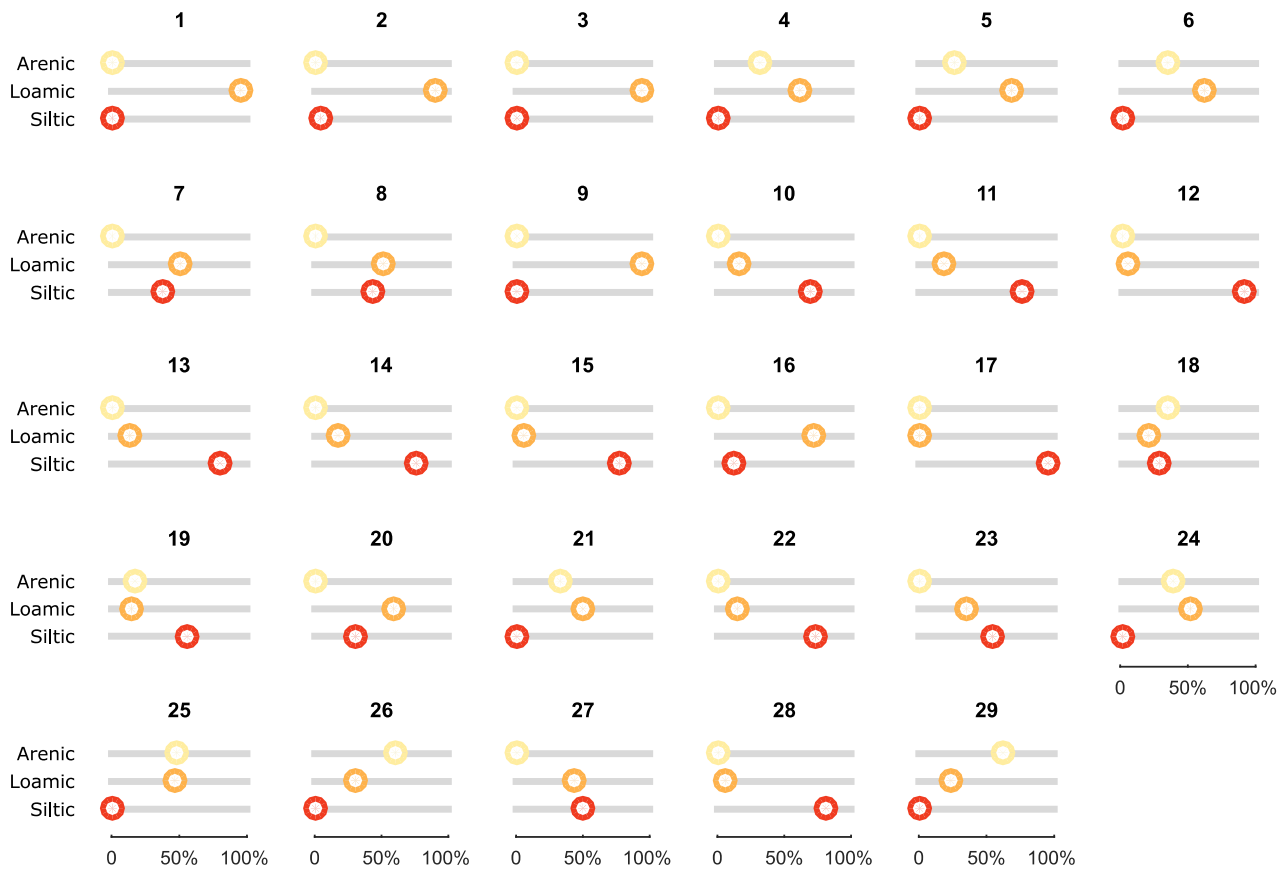


Figure S2. Relative areas of soil texture (arenic, loamic and siltic) for the selected catchments. Data from: www.dov.vlaanderen.be

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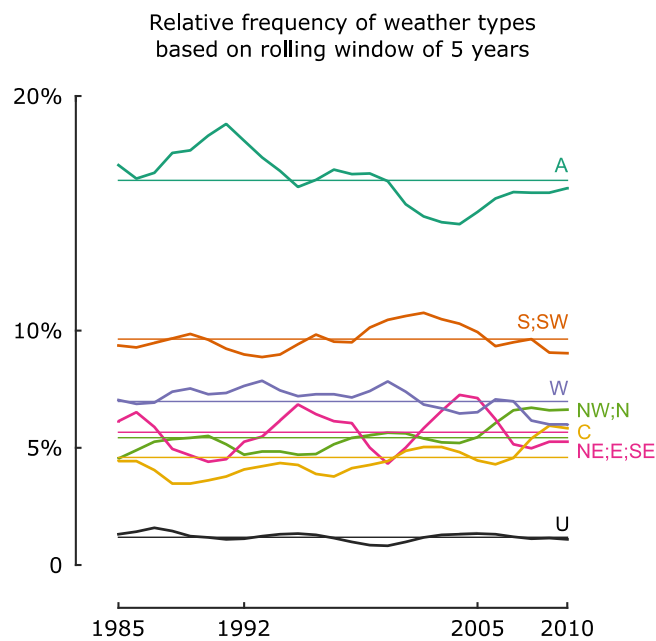


Figure S3. Relative frequency of Lamb weather types over the years.

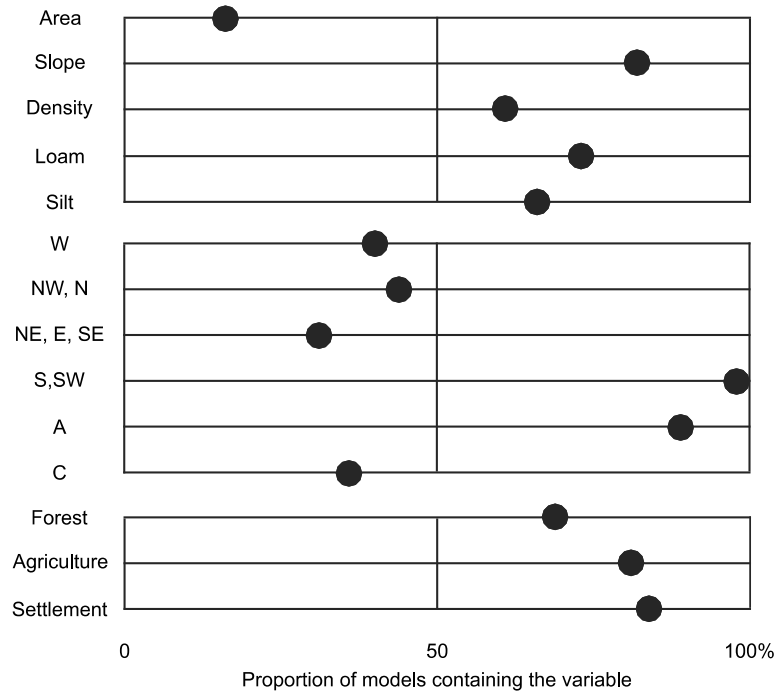


Figure S4. Variables appearing in >50% of the calibrated models are selected to explain changes in river peak flows.

Table S1. Main characteristics of the selected catchments.

	Id.	Outlet station	River	Area [km ²]	Period		# years
1	L01_491	Oostvleteren	Poperingevaart	64	1972	2018	46
2	L01_492	Reninge	Kemmelbeek	88	1986	2018	32
3	L01_496	Merkem	Marktjevaart	77	1986	2018	32
4	L02_422	Sint-Michiels	Kerkebeek	93	1983	2018	35
5	L02_425	Oostkamp	Rivierbeek	65	1983	2018	35
6	L02_442	Maldegem	Ede	46	1984	2018	34
7	L04_009	Massemen	Molenbeek	44	1987	2018	31
8	L04_036	Liezele	Molenbeek	104	1975	2018	43
9	L05_404	Moorsele	Heulebeek	73	1985	2018	33
10	L06_342	Nederzwalm	Zwalmbeek	111	1972	2018	46
11	L07_285	Essene	Bellebeek	90	1975	2018	43
12	L07_286	Sint-Katarina-Lombeek	Hunselbeek	22	1983	2018	35
13	L07_287	Ternat	Steenvoordebeek	26	1983	2018	35
14	L07_289	Viane	Mark	123	1976	2018	42
15	L08_112	Heverlee	Voer	49	1986	2018	32
16	L08_115	Heverlee	Molenbeek	48	1986	2018	32
17	L08_233	Sint-Pieters-Leeuw	Zuunbeek	65	1978	2016	38
18	L09_136	Hasselt	Demer	270	1983	2018	35
19	L09_138	Bilzen	Demer	116	1972	2018	46
20	L09_145	Ransberg	Velpe	97	1975	2018	43
21	L09_147	Molenstede	Zwart Water	79	1986	2018	32
22	L09_156	Rummen	Melsterbeek	153	1983	2018	35
23	L09_163	Spalbeek	Herk	274	1977	2018	41
24	L11_022	Overpelt	Dommel	112	1971	2018	47
25	L11_048	Merksplas	Mark	32	1983	2018	35
26	L11_518	Opoeteren	Bosbeek	76	1985	2018	33
27	LS06_347	Etikhove	Molenbeek	51	1972	2018	46
28	LS09_165	Wellen	Herk	111	1972	2018	46
29	knt03a-1066	Grobbendonk Troon	Kleine Nete	587	1982	2018	36

Table S2. Coefficients of the 26 terms in 9 predictors of the final model.

(Intercept)	-3.16	A	16.06	Loam:Forest	3.92
Slope	0.36	Slope:Loam	1.04	Loam:Agriculture	1.71
Density	0.05	Slope:Silt	0.75	Loam:Settlement	6.47
Loam	-10.45	Slope:Forest	-0.45	Silt:Agriculture	-1.51
Silt	-7.06	Slope:Agriculture	-1.22	Forest:A	-22.60
Forest	3.71	Slope:Settlement	-0.85	Agriculture:S_SW	-8.11
Agriculture	13.08	Density:Loam	66.84	Agriculture:A	-17.77
Settlement	-3.04	Density:Silt	73.81	Settlement:A	17.85
S_SW	11.13	Density:Agriculture	-75.22		