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Supplement of

Regionalization of monthly rainfall erosivity patterns in Switzerland

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Supplement Material

for

Regionalization of Monthly Rainfall Erosivity Patterns in Switzerland

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Table S1: Monthly erosivity density (ED_{mo87} ; $MJ\ ha^{-1}\ h^{-1}$) at the 87 stations calculated by R_{mo87}/P_{mo87} .

#	acronym	station	y-coordinate (CH1903)	x-coordinate (CH1903)	January	February	March	April	May	June	July	August	September	October	November	December
1	ABO	Adelboden	609400	148975	0.31	0.32	1.38	2.00	1.00	0.24	0.29	1.99	1.99	0.10	0.65	0.30
2	AIG	Aigle	560400	130713	0.90	0.72	0.64	2.56	1.57	0.34	0.96	4.08	4.08	0.27	1.01	0.79
3	ALT	Altdorf	690174	193558	0.56	0.51	0.52	2.83	0.28	0.18	1.44	3.07	3.07	0.55	0.52	0.26
4	BAS	Basel/Binningen	610911	265600	0.47	4.07	0.74	1.66	0.29	0.18	7.06	4.18	4.18	0.71	0.54	0.53
5	BER	Bern/Zollikofen	601929	204409	2.23	3.57	0.98	0.82	2.18	0.36	5.93	1.23	1.23	0.91	0.45	0.46
6	BEZ	Beznau	659808	267693	2.99	2.81	1.03	0.51	0.30	0.47	12.87	0.80	0.80	1.09	0.21	0.33
7	BUF	Buffalora	816494	170225	9.77	*	4.33	0.66	0.31	1.79	8.96	0.29	0.29	0.76	0.35	0.74
8	BUS	Buchs/Aarau	648389	248365	4.27	2.53	3.21	0.40	0.23	1.75	8.00	0.42	0.42	0.53	0.38	0.61
9	CDF	La Chaux-de-Fonds	550923	214893	0.73	0.88	2.65	0.46	0.37	2.85	1.86	0.16	0.16	0.44	0.24	0.35
10	CGI	Nyon/Changins	506880	139573	0.45	0.80	7.69	0.75	1.66	3.45	1.91	0.27	0.27	0.22	0.34	1.76
11	CHA	Chasseral	570842	220154	0.31	0.28	3.41	0.77	1.99	0.86	0.51	0.31	0.31	0.47	0.34	2.58

12	CHU	Chur	759471	193157	0.86	0.70	1.57	1.70	3.40	0.97	0.07	0.34	0.34	1.79	3.47	8.04
13	CHZ	Cham	677825	226880	0.95	1.26	2.71	3.57	1.75	0.30	0.20	0.76	0.76	0.82	4.43	12.63
14	CIM	Cimetta	704433	117452	0.67	2.07	0.74	3.25	0.50	0.19	0.18	1.14	1.14	0.59	1.93	2.88
15	COM	Acquarossa/ Comprovasco	714998	146440	0.45	0.99	0.56	2.57	0.36	0.10	0.45	1.35	1.35	1.61	1.93	1.02
16	COV	Piz Corvatsch	783146	143519	*	*	*	*	0.34	0.23	1.51	2.69	2.69	3.74	*	*
17	DAV	Davos	783514	187457	0.55	0.70	0.59	1.81	0.38	0.21	2.88	0.98	0.98	6.56	1.13	0.97
18	DIS	Disentis/Sedrun	708188	173789	1.23	2.82	1.15	1.17	0.23	0.43	4.69	0.50	0.50	5.22	0.61	0.78
19	DOL	La Dôle	497061	142362	0.81	1.38	0.50	0.37	0.18	0.91	2.68	0.22	0.22	1.73	0.22	0.17
20	ENG	Engelberg	674156	186097	3.73	3.77	0.15	0.38	0.20	1.14	0.73	0.18	0.18	1.84	0.30	0.21
21	EVO	Evolène / Villa	605415	106740	4.02	10.41	0.58	1.49	0.50	4.59	0.56	0.62	0.62	4.87	0.34	0.69
22	FAH	Fahy	562458	252676	1.69	2.27	0.13	0.06	0.39	2.76	0.38	0.39	0.39	0.73	1.57	0.51
23	FRE	Bullet / La Fraz	534221	188081	0.42	0.64	0.62	1.39	1.41	0.39	0.29	1.14	1.14	0.33	0.27	1.05
24	GEN	Monte Generoso	722250	87300	0.65	1.64	0.29	1.05	1.38	4.07	0.30	1.65	1.65	0.57	0.33	4.07
25	GLA	Glarus	723752	210567	0.41	0.69	0.11	5.60	1.26	0.19	0.29	2.24	2.24	1.31	1.64	3.76
26	GOE	Goesgen	640417	245937	0.28	0.46	0.74	5.11	1.72	0.20	0.95	7.68	7.68	3.09	3.76	5.79
27	GRH	Grimsel Hospiz	668583	158215	0.13	0.16	0.89	5.18	0.52	0.09	1.93	7.45	7.45	4.90	2.27	1.09
28	GSB	Col du Grand St- Bernard	579200	79720	0.21	0.14	0.65	3.54	0.22	0.10	5.17	9.04	9.04	3.80	1.80	0.21
29	GUE	Guetsch ob Andermatt	690140	167590	0.24	0.26	1.77	9.57	0.27	0.19	6.42	9.65	9.65	10.00	1.35	0.36
30	GUT	Guettingen	738419	273960	1.76	1.18	1.12	4.68	0.22	0.31	7.52	5.04	5.04	10.80	0.81	0.48
31	GVE	Genève-Cointrin	498903	122624	1.76	3.31	0.63	4.77	0.23	1.95	14.23	3.21	3.21	12.09	0.40	1.24
32	HIR	Hinterrhein	733900	153980	14.95	5.78	0.54	0.22	0.40	2.04	6.38	0.32	0.32	1.89	0.13	0.70
33	HOD	Hochtorf	663850	225520	3.29	2.57	0.32	0.22	0.98	2.17	2.80	0.16	0.16	3.02	0.34	2.83
34	HOE	Hörnli	713515	247755	2.09	1.25	0.14	0.35	1.51	2.27	2.38	0.08	0.08	0.82	0.16	2.43

35	INT	Interlaken	633019	169093	0.82	1.23	0.27	0.53	1.85	0.83	0.55	0.35	0.35	0.11	0.43	2.46
36	JON	Jona	706760	231280	0.86	0.72	0.34	0.28	2.16	0.36	24.96	0.22	0.22	0.23	0.57	0.75
37	KAP	Kappelen	588926	213323	0.58	0.53	0.48	1.08	5.18	0.24	1.25	0.51	0.51	1.43	3.96	0.40
38	KLO	Zuerich/Kloten	682706	259337	0.39	0.51	1.62	3.04	3.31	0.17	0.47	1.78	1.78	0.17	5.34	0.22
39	KRD	Krauchtal Dietersweg	611299	206530	0.18	1.80	1.07	5.52	1.59	0.23	1.31	1.61	1.61	0.20	3.96	0.44
40	KRL	Krauchtal Lindenberg	609041	205426	0.74	0.76	1.47	3.09	2.06	0.18	0.95	1.65	1.65	0.74	2.93	0.27
41	LAT	Langenthal	626820	231515	0.97	1.04	1.64	1.67	0.57	0.35	1.53	0.74	0.74	1.69	0.92	0.65
42	LAU	Langnau	640360	231200	2.43	2.52	1.25	0.69	0.20	0.57	2.55	0.43	0.43	1.00	0.84	0.49
43	LEI	Leibstadt	656378	272111	2.14	1.12	0.80	0.71	0.15	1.95	3.33	0.33	0.33	0.63	0.33	1.10
44	LUG	Lugano	717873	95884	3.92	3.01	1.33	0.40	0.20	1.26	0.35	0.17	0.17	0.46	0.11	3.72
45	LUZ	Luzern	665540	209848	3.22	4.60	0.40	0.27	0.33	2.38	0.57	0.08	0.08	0.79	0.58	2.69
46	MAG	Magadino/ Cadenazzo	715475	113162	2.13	1.85	0.62	0.13	0.96	2.06	1.39	0.13	0.13	0.14	0.17	3.42
47	MAH	Method	534870	178070	0.17	0.82	1.38	0.85	5.63	2.16	40.98	0.99	0.99	0.10	0.52	0.68
48	MTO	Moechaltorf	696925	240800	0.37	0.83	0.70	0.58	2.24	0.46	0.18	0.77	0.77	0.11	0.52	0.90
49	MUB	Mueleberg	587788	202478	0.33	0.72	0.83	1.14	2.00	0.35	0.17	1.87	1.87	0.22	2.88	0.46
50	MVE	Montana	601706	127482	0.23	0.15	3.22	2.72	1.04	0.23	0.51	3.86	3.86	0.71	3.22	0.34
51	NAP	Napf	638132	206078	0.21	0.29	1.78	1.84	0.22	0.20	0.31	2.05	2.05	1.59	2.92	0.20
52	NEU	Neuchâtel	563150	205600	0.47	0.38	4.67	2.57	0.41	0.19	1.40	0.73	0.73	3.73	5.57	0.13
53	OTL	Locarno/Monti	704160	114350	1.03	0.46	3.65	0.40	0.08	0.17	1.09	0.14	0.14	1.98	0.62	0.36
54	PAY	Payerne	562127	184612	3.40	0.85	4.35	0.67	0.94	0.47	2.27	0.16	0.16	2.28	1.15	0.52
55	PIL	Pilatus	661910	203410	1.24	*	0.78	0.12	0.25	0.50	1.38	0.36	0.36	1.03	0.23	0.80
56	PIO	Piotta	695888	152261	3.48	1.59	1.18	0.28	0.38	1.46	1.28	0.31	0.31	0.21	0.28	3.06
57	PLF	Plaffeien	586808	177400	5.09	2.76	1.23	0.12	0.88	1.44	0.44	0.27	0.27	0.20	0.56	6.57

58	PSI	PSI Wuerenlingen	659540	265600	2.41	1.73	0.18	1.31	1.26	2.87	0.31	0.64	0.64	0.16	0.54	2.02
59	PUY	Pully	540811	151514	0.96	1.98	0.43	0.38	2.51	0.89	0.27	0.86	0.86	0.23	0.72	0.72
60	REH	Zuerich/Affoltern	681428	253545	0.96	0.58	0.41	0.29	3.79	0.80	0.18	1.67	1.67	0.30	0.96	0.79
61	ROB	Poschiavo/Robbia	801850	136180	0.48	1.87	0.76	1.34	3.79	0.18	0.14	2.30	2.30	0.28	0.75	0.29
62	ROE	Robiì	682587	144091	0.17	*	0.85	0.28	1.16	0.09	0.15	2.32	2.32	0.13	0.26	0.11
63	ROO	Root	672060	218910	0.83	0.40	2.60	0.92	0.37	0.30	0.24	1.26	1.26	1.09	1.61	0.51
64	RUE	Ruenenberg	633246	253845	0.84	3.22	6.02	1.50	0.21	0.19	0.72	3.65	3.65	3.44	5.43	0.47
65	SAE	Saentis	744200	234920	*	*	0.85	0.35	0.21	0.17	0.77	0.39	0.39	1.12	0.45	0.13
66	SAM	Samedan	787210	155700	1.25	0.49	4.79	1.84	0.37	0.47	2.58	1.77	1.77	1.94	0.77	1.05
67	SBE	S. Bernardino	734112	147296	0.76	0.31	0.58	0.21	0.18	0.81	0.97	0.19	0.19	0.38	0.53	1.15
68	SBO	Stabio	716034	77964	2.53	0.52	0.63	0.28	0.18	1.54	0.87	0.20	0.20	0.28	0.42	2.43
69	SCU	Scuol	817135	186393	6.18	3.08	1.00	0.18	0.59	5.00	0.62	0.28	0.28	0.41	0.14	6.14
70	SEM	Sempach	656880	219360	1.79	5.53	0.11	0.75	1.08	2.51	0.21	0.22	0.22	0.31	0.26	6.83
71	SHA	Schaffhausen	688698	282796	1.01	4.01	0.32	1.13	2.54	0.62	0.41	0.51	0.51	0.35	0.19	2.28
72	SHE	Schoefheim	644500	200940	0.56	2.67	0.14	1.31	1.93	0.45	0.14	1.17	1.17	0.23	0.19	1.00
73	SIO	Sion	591630	118575	0.96	3.58	0.46	2.67	4.33	0.47	0.68	5.33	5.33	1.73	0.72	0.50
74	SMA	Zuerich/Fluntern	685117	248061	0.64	0.64	0.60	1.70	0.97	0.25	0.27	2.77	2.77	0.60	2.22	0.46
75	STG	St. Gallen	747861	254586	0.18	2.91	0.54	2.97	0.33	0.25	0.14	2.61	2.61	2.24	2.87	0.06
76	SUR	Sursee	649930	225040	0.18	0.24	1.17	2.27	0.35	0.34	0.36	1.22	1.22	4.36	2.95	3.71
77	TAE	Aadorf/Toenikon	710514	259821	0.27	0.11	0.60	1.52	0.39	0.28	0.48	0.75	0.75	8.88	1.35	0.22
78	ULR	Ulrichen	666740	150760	0.69	0.06	1.84	1.40	0.12	0.33	0.80	0.38	0.38	4.17	0.23	0.75
79	VAD	Vaduz	757718	221696	1.16	1.88	0.51	2.38	0.13	0.74	0.47	0.30	0.30	1.67	0.39	1.19
80	VIS	Visp	631149	128020	2.21	3.39	1.01	3.26	0.66	1.61	1.14	0.75	0.75	0.85	0.27	0.74

81	WAE	Waedenswil	693849	230708	1.15	8.03	0.20	0.05	0.33	1.35	0.17	0.15	0.15	0.55	0.21	0.43
82	WEE	Weesen	724969	221377	0.98	13.71	0.18	0.69	1.11	0.67	0.15	0.21	0.21	0.36	0.18	0.52
83	WFJ	Weissfluhjoch	780615	189635	*	*	*	0.58	3.81	0.46	0.25	0.18	0.18	0.22	0.26	*
84	WIL	Will	722100	256700	0.85	9.50	0.19	0.30	3.69	0.44	0.16	0.67	0.67	0.63	0.60	0.41
85	WSA	Wilisau	642650	220780	1.17	15.09	0.25	0.89	3.16	0.35	0.75	1.14	1.14	0.41	0.79	0.51
86	WYN	Wynau	626400	233850	0.32	9.33	0.56	1.19	1.98	0.42	0.31	1.67	1.67	0.19	0.31	0.77
87	ZER	Zermatt	624350	97566	0.84	9.64	4.80	3.14	0.80	0.37	1.02	1.52	1.52	1.11	1.78	0.85

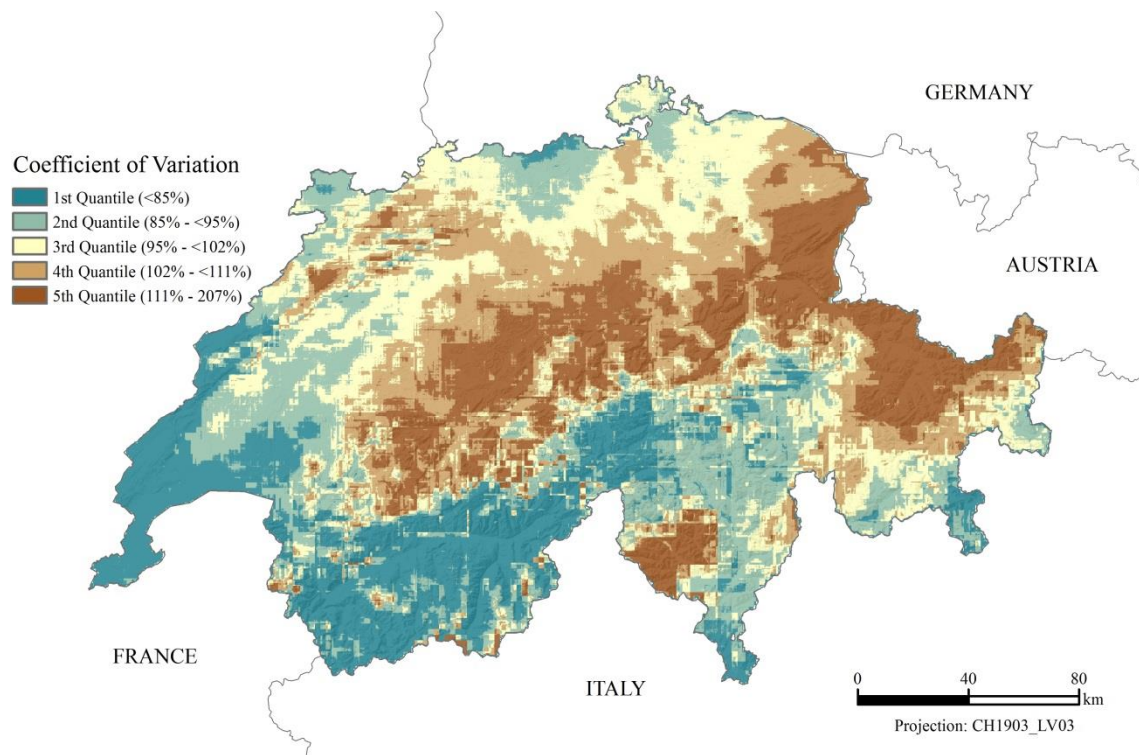


Figure S1: Coefficient of Variation map for Switzerland showing the variability of monthly rainfall erosivity among a year.

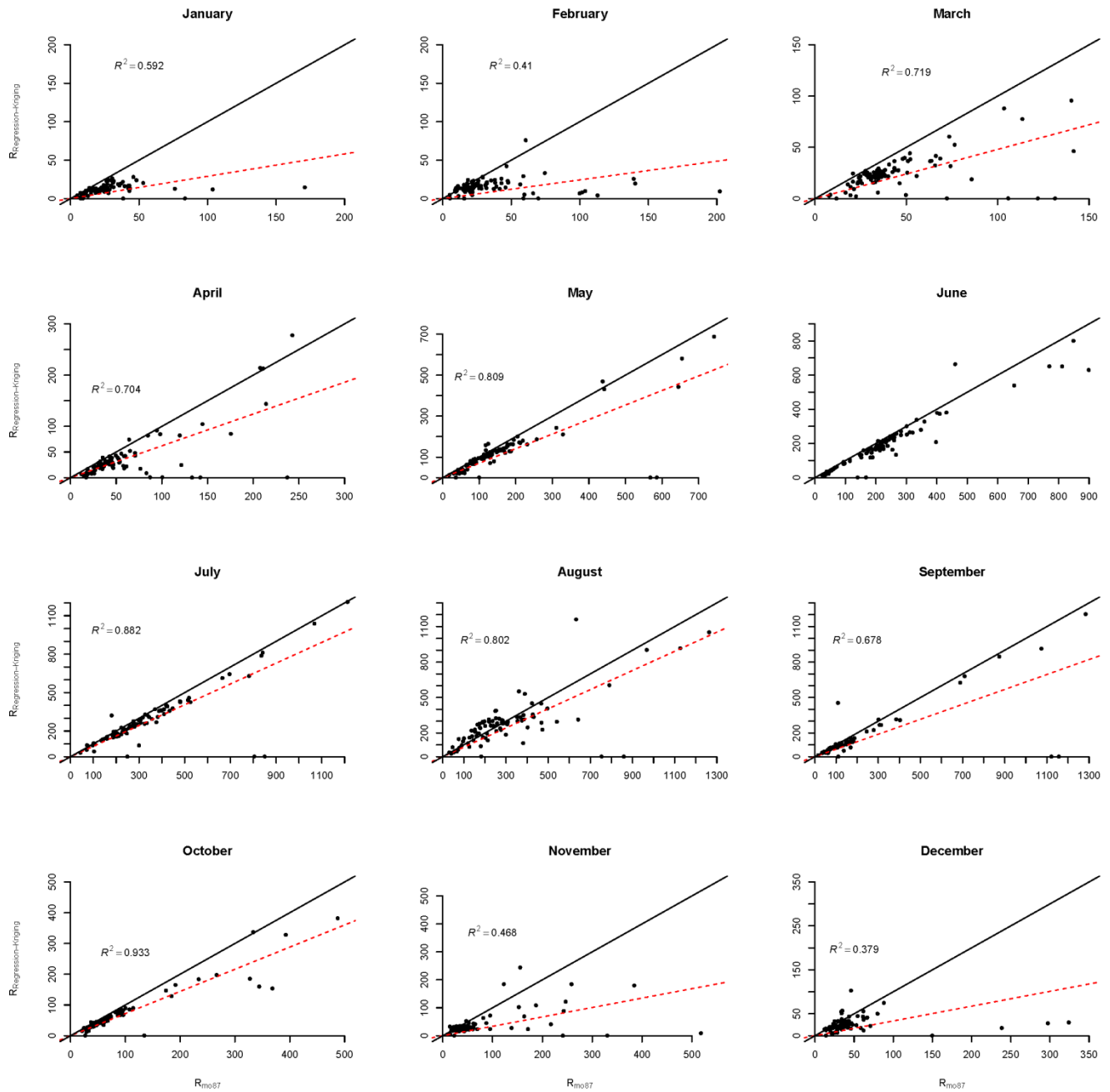


Figure S2: Relationships of the R-factors (MJ mm ha⁻¹ h⁻¹ month⁻¹) at the 87 stations (extracted from the 10-minutes data; R_{87}) and the interpolated R-factors at the 87 stations (extracted after the interpolation with Regression-Kriging; $R_{\text{Regression-Kriging}}$). The black line represents the 1:1 line, the red dashed line represents the linear regression line.