Supplementary material

Major Elements in the Upstream of Three Gorges Reservoir: An Investigation of Chemical Weathering and Water Quality during Flood Events

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Table S1. Raw data of major ions concentration and other hydrochemical parameters in TGR.

Number	F^-	NO_3^--N	Na^+	K^+	Ca^{2+}	Mg^{2+}	Cl^-	SO_4^{2-}	HCO_3^-	pH	EC	TDS
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		μS/cm	mg/L
S1	0.17	8.54	43.61	2.64	42.03	14.91	72.52	14.74	172.90	7.97	677	380
S2	0.27	19.72	50.01	2.81	41.53	16.40	87.94	0.10	180.16	8.11	734	410
S3	1.25	25.54	50.71	2.80	42.07	16.59	89.48	13.75	182.50	8.15	715	399
S4	0.20	21.67	50.74	2.88	41.98	16.70	88.82	4.72	176.60	8.19	714	396
S5	0.17	0.68	51.63	2.93	41.57	16.40	88.45	0.29	184.09	8.17	719	399
S6	0.17	20.93	35.53	3.12	38.66	12.95	55.88	0.00	154.65	7.96	592	331
S7	0.17	17.13	35.44	3.01	37.93	12.81	55.89	0.03	156.64	7.99	585	329
S8	0.20	16.94	33.92	3.15	38.22	12.76	55.91	10.35	154.62	7.93	569	319
S9	0.23	16.71	34.11	3.13	37.99	12.78	54.14	0.04	159.33	7.93	591	331
S10	0.18	0.11	28.61	3.12	40.75	12.46	44.04	37.08	146.67	7.86	527	296
S11	0.18	0.76	33.37	3.23	42.53	13.29	51.26	40.67	153.95	7.74	547	307
S12	0.18	0.13	31.90	3.16	41.28	13.07	48.77	38.05	154.22	7.75	544	303
S13	0.19	0.03	38.76	3.05	40.30	13.48	63.73	41.00	151.64	7.67	650	363

S14	0.18	3.84	33.59	3.07	42.04	12.49	51.93	40.43	156.21	7.76	584	328
S15	0.20	2.44	33.17	3.00	40.65	12.43	52.28	40.01	146.79	7.76	564	317
S16	0.21	1.78	32.77	3.10	42.32	12.22	51.28	43.91	150.88	7.77	561	316
S17	0.19	3.20	33.73	3.17	41.60	12.36	51.42	40.34	150.89	7.79	551	308
S18	0.37	0.00	38.45	3.08	41.21	13.18	61.29	42.50	150.19	7.93	585	331
S19	0.19	0.08	32.72	3.18	40.86	12.19	49.90	43.06	144.95	7.93	552	309
S20	0.17	9.85	18.41	2.87	42.76	10.72	21.96	9.28	156.09	7.74	475	267
S21	0.37	15.43	18.00	2.80	40.06	10.89	22.89	0.19	151.70	7.77	474	267
S22	0.46	15.63	14.53	2.93	40.47	9.69	16.70	0.69	148.46	7.82	440	247
S23	0.22	14.42	15.27	2.93	40.30	10.08	17.50	29.36	134.83	7.85	430	244
S24	0.24	0.49	15.05	3.01	39.30	9.52	17.93	0.25	149.06	7.88	438	246
S25	0.32	15.13	14.16	3.12	39.08	9.38	16.77	3.27	145.08	7.87	439	245
S26	0.24	0.89	14.94	3.50	41.59	9.30	16.63	0.00	151.69	7.26	464	260
S27	0.24	15.10	15.08	3.38	40.61	9.21	16.10	16.92	150.00	7.64	449	249
S28	0.22	14.73	16.92	2.77	40.61	10.53	19.93	0.33	152.88	7.65	470	262
S29	0.19	14.87	17.57	2.83	40.63	10.71	20.36	0.10	155.48	7.71	485	272
S30	0.14	15.56	8.71	2.39	43.25	9.13	9.36	32.33	160.78	7.80	431	242
S31	0.16	4.99	4.13	2.38	46.43	7.35	4.84	28.22	147.61	7.99	390	217
S32	0.14	5.10	4.09	2.39	46.21	7.33	3.33	27.82	145.85	7.96	366	204
S33	0.15	0.87	4.11	2.40	46.30	7.31	3.27	27.62	148.76	7.99	341	191
S34	0.17	14.61	14.14	2.65	43.63	10.02	16.12	0.50	155.33	7.81	461	260
S35	0.21	0.00	13.15	3.17	43.71	8.40	16.54	28.71	148.51	7.67	318	178
S36	0.17	0.55	14.32	2.71	46.52	10.21	15.95	8.34	170.45	7.84	520	291
S37	0.19	16.07	13.67	2.61	43.78	9.86	15.95	1.30	159.66	7.79	467	262
S38	0.26	15.40	14.19	2.76	44.50	10.20	16.70	0.31	162.35	7.75	469	263
S39	0.22	8.57	14.37	2.77	44.56	10.20	16.13	0.28	162.36	7.77	462	258
S40	0.23	0.52	5.56	2.66	29.78	20.30	4.15	0.00	122.57	7.92	309	172
S41	0.16	14.28	5.41	2.56	29.02	19.69	5.70	0.00	115.88	7.86	295	167
S42	0.40	0.01	21.84	5.48	55.34	11.60	27.08	60.13	176.05	7.84	550	307
S43	0.43	0.01	21.51	5.37	54.83	11.34	30.66	55.53	175.82	7.85	542	304
S44	0.25	14.39	10.36	3.69	41.38	11.32	9.90	0.00	148.48	7.77	410	230
S45	0.24	20.83	10.42	3.62	40.50	10.78	9.43	0.00	145.76	7.84	414	231
S46	0.16	3.34	3.76	2.25	44.97	10.74	4.10	32.69	159.09	7.80	390	225

S47	0.28	0.00	4.13	2.42	33.12	8.29	2.84	9.63	114.39	7.52	225	126
S48	0.28	0.00	4.20	2.38	38.26	8.17	3.52	11.73	133.28	7.91	253	142
S49	0.24	0.54	3.73	2.60	33.44	7.82	3.34	9.84	110.50	7.79	222	125
S50	0.22	0.04	3.44	2.54	33.75	7.09	51.26	10.02	116.51	7.55	217	122
S51	0.22	1.64	3.64	2.61	32.42	7.00	48.77	10.47	111.49	7.77	212	119
S52	0.25	0.00	8.65	2.84	39.78	6.58	8.98	20.79	138.94	7.89	311	170
S53	0.61	0.00	9.46	2.82	40.91	6.55	9.88	21.58	142.40	7.83	276	155
S54	0.22	0.00	9.51	2.85	40.90	6.45	10.48	22.25	143.07	7.71	288	161
S55	0.47	15.40	20.15	2.68	35.08	4.96	25.81	0.33	126.51	7.50	470	263
S56	0.40	0.48	16.99	2.78	43.95	4.25	19.63	29.63	159.61	7.54	507	282
S57	0.17	14.57	16.01	2.75	45.15	3.98	17.62	13.75	161.60	7.39	601	333

Table S2. Raw data of precipitation and inflow in TGR (Changjiang River Hydrological Network, www.cjh.com.cn (11 December 2020))

Date	**Infow of TGR**	**The maxmium precipitation**
	m^2/S	mm
2020.6.22	36500	25
2020.6.27	20000	100
2020.6.28	40000	10
2020.6.29	39000	10
2020.7.1	32000	100
2020.7.2	53000	25
2020.7.3	41000	25
2020.7.4	31000	50
2020.7.5	31000	25
2020.7.6	33000	10
2020.7.7	30500	25
2020.7.8	33000	10
2020.7.9	30000	10
2020.7.1	23500	25

2020.7.11	22500	25
2020.7.12	32000	50
2020.7.13	37000	10
2020.7.14	32000	25
2020.7.15	30000	50
2020.7.16	31000	100
2020.7.17	49000	50
2020.7.18	61000	25
2020.7.19	38000	10
2020.7.2	40000	10
2020.7.21	28500	10