



Figure S1. STIFF diagrams of all the water springs samples classified by clusters.

Table S1. Coordinates of the spring water samples and results of analyses of the physico-chemical parameters used in this article.

Index	MEET Number	Cluster	long WGS 84	lat WGS 84	In-situ T°(C)	pH	EC ($\mu\text{s/cm} \times 10^3$)	TDS (mg/l)	Turbidity (NTU)	TOC (mg/l)	HCO ₃ (mg/l) computed	Bromide (mg/l)	Chloride (mg/l)	Fluoride (mg/l)	Nitrate (NO ₃) (mg/l)	Nitrite (mg/l)	Ortho-Phosphate (mg/l)	Sulfate (mg/l)
1	MEET-HV002-001W	7	5.357425	50.309063	11.9	6.72	309	214	0.70	1.50	96.4	0.04	17.3	0.06	50.2	0	0	19.0
2	MEET-HV003-001W	7	5.341424	50.311882	11.9	6.72	244	145	0.50	1.50	95.0	0.04	25.7	0.07	50.2	0	0	15.0
3	MEET-HV004-001W	7	5.343775	50.316070	10.8	6.64	228	156	3.90	1.50	77.3	0.03	27.5	0.04	20.0	0.004	0	13.0
4	MEET-HV005-001W	7	5.337726	50.340060	8.5	6.78	354	20.0	2.20	1.21	103	0.03	19.5	0.07	42.0	0	0.10	28.2
5	MEET-HV006-001W	7	5.340398	50.340480	8.1	6.67	344	218	1.80	2.20	100	0.03	28.2	0.02	41.8	0	0.10	23.3
6	MEET-HV013-001W	7	5.203312	50.315150	9.5	6.64	200	166	6.90	1.50	64.7	0.04	51.0	0.04	40.0	0	0	12.1
7	MEET-HV014-001W	7	5.199670	50.285396	10.0	6.50	327	212	1.20	1.20	65.9	0.04	36.2	0.04	47.1	0	0	14.6
8	MEET-HV021-001W	6	5.190649	50.285180	10.2	6.40	742	404	0.80	1.30	102	0.05	151	0.06	25.2	0	0	23.4
9	MEET-HV022-001W	7	5.190649	50.285180	10.2	6.40	829	277	0.80	1.30	102	0.05	71.4	0.04	24.0	0	0	14.0
10	MEET-HV024-001W	6	5.171418	50.336708	10.1	7.21	533	345	0.30	0.30	318	0.05	18.2	0.06	26.3	0	0	28.5
11	MEET-HV027-001W	6	5.176238	50.333333	10.6	7.15	300	334	0.50	2.10	229	0.04	24.7	0.04	45.2	0.004	0.10	27.3
12	MEET-HV030-001W	7	5.176654	50.272523	9.80	6.46	281	150	3.30	1.40	69.5	0.02	29.3	0.04	15.9	0	0	20.0
13	MEET-HV031-001W	6	5.176654	50.272523	9.80	6.46	242	134	1.20	1.40	69.5	0.02	15.7	0.07	15.0	0	0	21.1
14	MEET-HV043-001W	7	5.257928	50.270916	8.85	5.70	108	116	0.70	1.30	9.76	0.03	7.00	0.02	39.6	0.003	0	5.10
15	MEET-HV047-002W	7	5.271514	50.321141	6.8	6.83	285	224	0.60	1.32	0.02	7.10	0.05	40.7	0.003	0	8.00	
16	MEET-HV049-001W	7	5.281292	50.319315	9.40	5.97	127	104	2.40	4.70	25.6	0.02	13.1	0.03	17.4	0.002	0	12.3
17	MEET-HV050-001W	6	5.281292	50.319315	10.0	7.21	243	200	0.70	2.00	20.6	0.04	6.00	0.04	14.7	0	0	11.2
18	MEET-HV052-001W	7	5.282649	50.323647	10.2	6.21	163	138	1.70	1.20	23.2	0.03	6.20	0.04	45.0	0	0	11.4
19	MEET-HV067-001W	6	5.307116	50.306477	13.0	7.20	395	392	0.50	0.04	397.7	0.04	14.2	0.07	10.3	0	0	35.2
20	MEET-HV070-001W	7	5.307116	50.305980	9.80	6.50	108	303	0.50	0.04	349.0	0.04	37.0	0.07	10.0	0.004	0	35.0
21	MEET-HV074-001W	6	5.307116	50.266777	8.73	6.60	454	178	2.63	1.15	43.5	0	14.2	0.09	4.00	0.003	0.10	8.00
22	MEET-HV076-001W	6	5.408091	50.285423	10.7	7.90	152	453	0.60	0.03	395	0.03	29.6	0.11	17.4	0	0	23.5
23	MEET-HV078-001W	7	5.386151	50.203374	10.1	6.60	98.0	94.0	1.20	1.70	17.1	0.03	8.20	0.04	25.9	0	0	18.0
24	MEET-HV079-001W	6	5.386151	50.203374	10.1	6.60	98.0	94.0	1.20	1.70	17.1	0.03	8.20	0.04	25.9	0	0	18.0
25	MEET-HV084-001W	5	5.623128	50.367119	9.27	6.19	156	154	2.60	4.00	8.30	0.12	7.80	0.015	7.80	0	0	14.0
26	MEET-HV085-001W	5	5.623128	50.350811	9.47	7.99	218	136	5.80	1.20	11.0	0.03	7.00	0.07	6.10	0	0	14.0
27	MEET-HV088-001W	7	5.303044	50.252562	8.54	6.47	104	114	4.70	9.40	32.9	0.01	3.20	0.11	17.1	0.005	0	6.50
28	MEET-HV090-001W	6	5.303044	50.252562	8.54	6.47	104	114	4.70	9.40	32.9	0.01	3.20	0.11	17.1	0.005	0	6.50
29	MEET-HV092-001W	7	5.242147	50.289962	8.24	7.46	323	222	2.57	3.40	12.6	0.03	20.1	0.07	9.00	0	0	14.6
30	MEET-HV093-001W	7	5.601489	50.361829	9.81	5.96	155	104	0.70	0.80	19.5	0.03	8.10	0.06	35.3	0.002	0	17.6
31	MEET-HV095-001W	6	5.201513	50.288094	9.33	7.45	428	248	1.00	0.50	210	0.04	10.2	0.08	20.3	0	0	19.1
32	MEET-HV096-001W	7	5.201513	50.277530	10.3	7.04	245	250	0.50	0.50	107	0.04	24.7	0.07	7.0	0	0	16.2
33	MEET-HV070-001W	1	5.254159	50.371587	10.0	5.65	627	372	3.50	1.50	493	0.15	17.6	0.1	10.0	0	0	4.10
34	MEET-HV072-001W	7	5.646445	50.302562	9.80	6.09	264	150	0.80	1.10	76.9	0.02	42.4	0.06	12.5	0	0	6.40
35	MEET-HV075-001W	7	5.395113	50.326252	10.7	6.57	245	165	7.70	1.10	117	0.03	18.1	0.11	11.7	0.003	0	12.4
36	MEET-HV076-001W	7	5.395113	50.326252	10.7	6.57	245	165	7.70	1.10	117	0.03	18.1	0.11	11.7	0.003	0	12.4
37	MEET-HV077-001W	7	5.323562	50.089198	9.68	6.28	200	46.0	7.00	0.30	11.0	0.03	3.60	0.02	6.40	0	0	9.10
38	MEET-HV083-001W	7	5.323562	50.174927	9.5	6.49	285	204	1.20	2.00	31.7	0.04	14.4	0.04	7.85	0	0.70	17.3
39	MEET-HV084-001W	8	5.324197	50.174927	9.5	6.49	285	204	1.20	2.00	31.7	0.04	14.4	0.04	7.85	0	0.70	17.3
40	MEET-HV094-001W	6	5.306665	50.310462	10.6	7.21	337	354	0.30	2.20	261	0.05	29.9	0.04	34.6	0.023	0	37.1
41	MEET-HV097-001W	4	5.307422	50.308075	11.0	7.84	499	324	0.90	1.20	273	0.07	21.1	0.07	50.0	0.011	0.10	49.8
42	MEET-HV098-001W	4	5.310890	50.309037	12.5	7.49	473	498	0.20	0.40	285	0.04	13.5	0.33	3.60	0	0	16.4
43	MEET-HV099-001W	7	5.310890	50.309037	12.5	7.49	473	498	0.20	0.40	285	0.04	13.5	0.33	3.60	0	0	16.4
44	MEET-HV113-001W	3	5.681578	50.400037	3.66	6.00	426	286	8.30	2.60	325	0.04	7.50	0.03	1.00	0.006	0	2.30
45	MEET-HV114-001W	2	5.664020	50.419429	8.27	5.70	748	490	33.00	1.20	459	0.04	64.8	0.09	0	0	0	8.80
46	MEET-HV115-001W	2	5.631599	50.371924	9.50	5.50	371	350	1.10	1.00	416	0.15	23.4	0.11	0.10	0	0.10	1.60
47	MEET-HV116-001W	7	5.631599	50.371924	9.50	5.50	371	350	1.10	1.00	416	0.15	23.4	0.11	0.10	0	0	1.60
48	MEET-HV124-001W	7	5.615739	50.089477	8.70	5.77	62.7	76.0	2.00	0.50	11.0	0.02	6.60	0.02	11.3	0	0	2.90
49	MEET-HV126-001W	3	5.423131	50.174138	10.5	6.70	170	108	3.40	0.40	81.7	0.03	9.10	0.16	0.90	0.007	0	14.2
50	MEET-HV127-001W	6	5.648793	50.383770	35.9	7.35	639	362	0.60	0.30	327	0.10	33.1	0.52	0.10	0	0	42.3

Index	Al (mg/l)	B (mg/l)	Ba (mg/l)	Bn (mg/l)	Ca (mg/l)	Ca (mg/l)	Ca (mg/l)	Fe (mg/l)	K (mg/l)	Mg (mg/l)	Mg (mg/l)	Mn (mg/l)	Mn (mg/l)	Mn (mg/l)	Pb (mg/l)	Pb (mg/l)	Si (mg/l)	Si (mg/l)	Si (mg/l)	Zr (mg/l)	Zr (mg/l)	Zr (mg/l)	
1	0.005	0.013	0.039	0	30.3	0.0005	0.004	2.70	0	23.0	0.0001	8.80	0.0010	0.0005	0.0005	0.0001	2.40	0.0005	0.0003	0.0003	0.0003	0.0003	
2	0.005	0.016	0.039	0.00001	39.6	0.0002	0.0008	0.04	1.80	0	15.2	0.0001	10.2	0.0011	0	0.0005	2.60	0.0000	0.0002	0.0002	0.0002	0.0002	
3	0.023	0.009	0.020	0.00003	16.7	0	0.0003	0.060	0.80	0	8.47	0.0006	17.1	0.0009	0.0003	0.0005	0.0001	3.50	0.051	0.0001	0.0002	0.0002	0.0002
4	0.001	0.024	0.039	0	39.9	0.0005	0.0009	0.002	0.30	0.80	0.04	0.43	0.0009	0.0001	10.7	0.0010	0	0.0004	0.0001	0.0002	0.0002	0.0002	
5	0.001	0.022	0.040	0	32.6	0.0001	0.0009	0.002	8.0														

Table S2. Detailed list of the SWDE laboratory parameters and LOQ.