

**Table S1.** Average of metal concentrations (ppm) and total organic matter (%) in bottom sediment of Lake Qaroun in first year.

S. L.	OM	Mn	Sb	As	Cd	Cr	Cu	Fe	Pb	Se	Zn	Ni	Co	Mo	Li	Mg	Al	Ba	Zr	P	Ga	Hf
1	14.23	258	4.53	6.97	6.04	44.8	32.5	12146	11.68	ND	30.51	15.56	11.66	1.46	28.01	992	20908	265	11263	2676	145	14.26
2	16.29	247	6.04	6.2	5.88	44.22	30.22	11419	10.27	ND	27.59	15.46	12.12	0.70	29.35	992	19790	272	10534	2582	165	13.23
3	12.33	166	7.74	12.32	4.8	34.02	22.06	8667	1.76	2.26	20.44	12.82	9.07	0.91	17.7	965	15753	261	12032	2476	126	11.60
4	12.24	331	8.56	3.37	5.05	36.1	35.6	11342	10.6	0.01	36.8	23.1	15.3	2.32	27.3	1075	16890	184	10103	2820	178	10.72
5	11.80	716	4.32	20.5	5.61	49.1	16.9	7996	5.95	0.43	14.2	12.4	11.2	1.57	17.2	987	17002	245	11850	2699	196	11.0
6	4.11	509	11.3	5.95	5.15	60.0	23.1	8921	4.76	0.02	11.3	10.8	17.3	1.01	14.7	1241	12855	280	11907	2925	290	11.9
7	3.23	515	5.14	11.00	4.02	19.46	13.1	5503	1.36	2.53	11.95	6.7	7.73	1.02	15.39	865	10652	311	5302	2645	95.9	6.08
8	3.04	217	6.95	24.6	5.76	20.1	10.4	5863	0.03	6.03	4.4	3.1	7.35	0.98	21.0	685	10001	102	7688	3696	247	5.69
9	17.86	383	6.06	5.55	7.18	62.3	52.89	16446	18.12	ND	58.42	28.01	16.92	2.09	30.66	999	21500	208	12684	2784	192	18.5
10	5.75	298	6.86	17.3	4.45	36.4	20.8	7288	3.05	0.09	21.0	15.7	16.0	3.64	17.6	1174	10400	113	5844	2825	177	7.06
11	8.13	340	6.06	14.7	5.04	38.0	25.8	9778	4.15	0.01	11.7	16.5	9.67	0.63	24.6	1043	16052	205	7262	3066	124	9.88
12	2.61	321	2.66	13.9	4.95	29.8	18.6	7866	8.85	3.09	13.1	14.3	10.3	0.30	19.1	1210	17006	242	7009	2802	89.7	9.45
13	9.21	381	4.78	10.7	6.34	50.0	36.7	17016	2.51	0.04	23.0	20.0	17.1	0.90	22.9	1046	21743	295	8234	3090	136	13.9
14	3.30	257	6.11	14.19	4.83	23.92	14.1	6599	5.2	0.61	3.79	7.68	8.36	1.1	22.46	1107	11742	172	7237	2997	144	8.15
15	3.80	463	4.58	23.7	4.32	26.3	17.2	6094	2.4	0.96	12.9	10.6	10.7	0.65	15.4	801	10993	198	5956	3213	121	7.97
16	2.31	116	1.22	26.5	3.23	9.38	6.09	2519	0.01	4.12	8.04	5.85	2.05	1.33	15.1	790	3400	60.0	2063	3209	44.1	4.55
17	1.17	43.7	0.01	25.6	3.89	6.07	3.01	2251	ND	7.85	0.04	3.01	2.52	0.06	16.6	968	6632	98.5	4688	2769	28.1	3.92
18	2.61	80.4	4.97	19.9	4.15	12.75	7.49	4445	3.91	4.27	ND	2.26	2.61	0.13	19.16	1162	11636	207	5780	3191	55.8	5.99
19	0.75	109	4.89	23.3	4.43	13.1	7.02	3172	0.16	5.98	0.06	1.89	6.73	3.02	17.0	880	9921	158	5902	3134	115	5.81
20	8.42	194	10.4	22.9	5.92	47.6	32.0	14896	5.01	0.01	43.9	18.1	9.87	4.12	40.0	998	18122	102	4977	3256	142	10.9
21	10.91	258	13.1	33.5	5.73	40.4	23.5	12972	7.08	1.04	40.7	9.61	18.0	0.10	18.9	1367	9899	55.4	3642	4292	190	7.23
22	1.45	143	5.12	15.4	4.16	16.5	12.5	6945	0.01	1.58	0.01	2.72	11.0	0.09	10.3	1163	10222	172	4774	2836	171	5.35

S.L.: sampling location; ND: not detected.

**Table S2.** Average of metal concentrations (ppm) and total organic matter (%) in bottom sediment of Lake Qaroun in second year.

S. L.	OM	Mn	Sb	As	Cd	Cr	Cu	Fe	Pb	Se	Zn	Ni	Co	Mo	Li	Mg	Al	Ba	Zr	P	Ga	Hf
1	14.53	261	4.67	7.35	6.44	45.01	32.59	12332	13.0	ND	30.98	16.9	11.05	1.02	26.78	984	20706	263	11072	2591	134	15.06
2	16.33	257	6.48	6.89	6.03	44.78	31.21	11812	10.9	0.01	28.43	16.0	12.75	0.92	30.05	977	20003	291	10230	2504	148	14.06
3	12.53	153	7.01	13.0	5.01	35.11	22.83	8939	1.55	2.14	22.03	12.2	10.01	1.31	15.96	963	15968	245	12340	2510	129	12.56
4	12.69	335	7.68	4.59	5.65	37.1	36.4	11598	9.54	ND	39.2	22.2	14.4	1.27	26.52	975	17330	165	10802	2695	159	12.9
5	12.01	787	5.84	22.3	5.31	48.6	18.1	7861	6.55	0.52	13.5	11.8	12.5	1.38	18.0	929	16558	286	12131	2789	202	10.4
6	4.37	568	10.3	6.65	5.67	63.3	22.0	8869	4.28	ND	11.0	12.8	19.7	0.70	13.1	1082	13133	257	12177	2777	324	11.5
7	2.93	497	5.67	10.26	4.66	20.22	13.9	5648	1.64	2.67	12.34	7.40	8.12	1.26	16.12	887	10443	360	5623	2909	104	8.27
8	3.17	224	7.34	27.9	5.64	21.0	11.3	5736	0.02	6.54	5.9	2.16	9.63	1.55	19.3	708	9452	121	7658	3394	221	7.64
9	18.07	391	6.66	5.81	7.45	63.0	52.1	16963	18.8	ND	60.1	28.5	17.5	2.48	29.69	1023	21856	233	12486	2643	208	21.1
10	5.85	313	7.57	15.5	4.47	34.9	21.1	7324	2.75	0.07	20.0	17.5	13.4	2.69	19.2	1015	10188	95.3	5557	3052	166	7.82
11	8.53	363	6.36	12.3	5.34	36.5	23.6	9859	4.67	ND	12.4	15.5	12.3	0.75	23.7	1157	16637	237	7642	3290	141	10.3
12	2.71	371	2.87	12.9	4.86	28.3	17.1	7746	8.15	3.12	11.4	12.2	9.16	0.08	22.4	1113	17259	258	7135	3025	104	8.81
13	9.96	364	4.13	9.52	6.84	48.3	39.1	16237	2.73	ND	25.8	22.3	15.6	0.18	24.0	1123	21258	281	8778	2917	146	15.7
14	3.52	269	6.78	14.6	5.15	24.5	14.7	7032	5.46	0.74	4.05	7.93	8.95	1.28	23.86	1136	11657	201	7321	3068	112	7.81
15	3.63	483	5.69	20.6	4.46	28.2	15.7	6294	2.15	1.02	12.2	9.50	9.12	1.24	13.4	876	10583	158	5795	3414	107	7.27
16	2.11	110	1.76	27.5	3.33	8.42	6.49	2319	0.02	3.75	6.88	6.20	2.93	1.54	14.1	859	3124	45.6	2274	3137	46.2	3.73
17	1.33	48.3	0.08	24.2	4.02	6.55	3.60	2134	ND	8.16	0.05	2.70	0.79	0.68	14.3	916	6458	105	4569	3004	36.3	4.18
18	2.72	86.3	5.23	21.0	4.98	13.1	8.12	4433	4.32	4.38	0.03	2.84	3.03	0.25	19.85	1202	11964	218	5902	3101	50.7	6.42
19	0.69	106	5.07	25.9	4.53	13.8	6.60	3979	0.37	5.66	0.04	2.08	4.45	1.25	15.7	971	9987	176	5800	3233	99.8	5.53
20	8.06	186	9.89	24.5	6.12	49.1	31.8	14754	4.88	0.02	40.7	16.8	12.1	5.92	38.1	1037	18575	93.5	4621	3327	162.6	12.7
21	11.04	268	12.9	36.5	5.57	41.1	25.4	12539	7.86	0.91	46.0	8.14	16.7	0.16	20.9	1325	9949	62.5	3747	4393	200.4	9.45
22	1.96	169	6.38	19.3	4.86	17.2	13.0	7033	0.02	1.88	ND	1.44	8.95	0.14	12.9	1301	9531	194	4579	2978	158.2	6.58

S.L.: sampling location; ND: not detected.