Supplemental Information
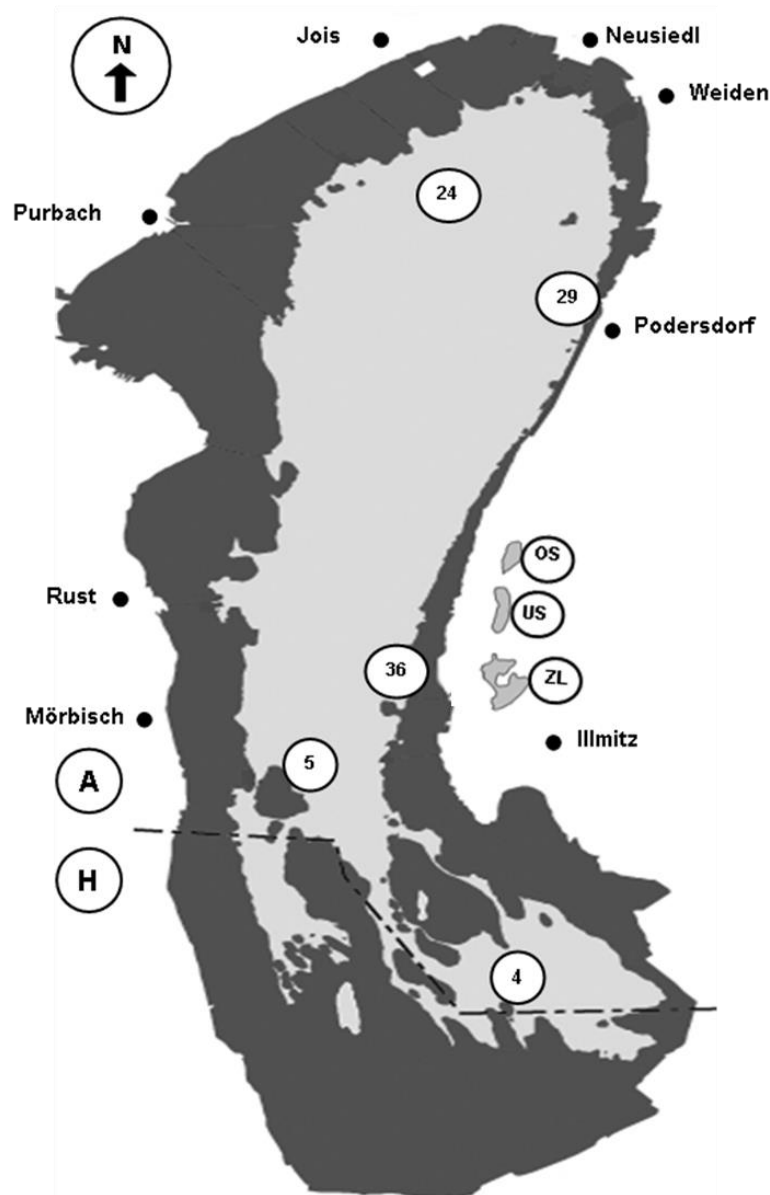
Rupert Bliem, Georg Reischer, Rita Linke, Andreas Farnleitner & Alexander Kirschner: Spatiotemporal Dynamics of *Vibrio cholerae* in Turbid Alkaline Lakes Determined with Quantitative PCR

Fig. S1. Lake Neusiedler See, shared by Austria (A) and Hungary (H), and the soda lakes Zicklacke (ZL), Unterstinker (US), and Oberstinker (OS, not covered in this study) located adjacent to the eastern shore of the lake. The dark area of the Neusiedler See depicts the reed belt which makes up approx. 55% of the total lake area. For a representative sampling of the lake the following sampling sites were chosen: two open water sites (5, 24), one site within the reed belt (36), one intermediate site (4; not covered in this study) and one close to the run-off from the only sewage treatment plant directly emitting into the lake (29). Figure taken from Schauer et al (2015), Suppl. Information.

Literature:

Schauer S, Jakwerth S, Bliem R, Baudart J, Lebaron P, Huhulescu S, Kundi M, Herzig A, Farnleitner AH, Sommer R, Kirschner A (2015) Dynamics of Vibrio cholerae abundance in Austrian saline lakes, assessed with quantitative solid-phase cytometry. Environmental Microbiology 17(11):4366-4378.

Table S1: Spearman Rank correlations of *V. cholerae* concentrations and global recovery rates with environmental variables in the lake Neusiedler See (pooled data from 2011 and 2014). Ptot: total phosphorus, DOC: dissolved organic carbon, 250/365nm: 250 nm/365 nm photometric ratio; CFU: colony forming units; GU: genomic units; significant correlations mentioned in the text are shaded with green.

Lake Neusiedler See			qPCR uncorrected	cultivation	GR rate	CARD-FISH SPC	pH	Conductivity	oxygen	Ptot	NH4-N	NO3-N	Chlorophyll a	Temperature	DOC	250/365 nm	Secchi
qPCR corrected		rho	0.961	0.712	-0.307	0.552	0.010	0.129	-0.451	0.124	0.247	0.048	0.067	0.580	0.161	-0.078	0.152
		p-value	< 0.001	< 0.001	0.002	0.002	0.926	0.206	< 0.001	0.225	0.050	0.649	0.509	< 0.001	0.111	0.457	0.132
		N	102	102	102	30	97	97	96	98	64	93	98	102	99	94	100
	qPCR uncorrected	rho		0.698	-0.185	0.604	0.055	0.085	-0.403	0.116	0.243	-0.033	0.070	0.556	0.153	-0.048	0.111
		p-value		< 0.001	0.062	< 0.001	0.590	0.409	< 0.001	0.256	0.050	0.752	0.496	< 0.001	0.131	0.647	0.271
		N		102	102	30	97	97	96	98	65	93	98	102	99	94	100
	Cultivation [log(CFU/100 ml)]	rho			0.319	0.617	0.253	-0.014	-0.509	0.065	0.150	0.208	0.004	0.707	0.003	0.094	0.039
		p-value			0.001	< 0.001	0.012	0.891	< 0.001	0.525	0.151	0.046	0.970	< 0.001	0.979	0.365	0.699
		N			102	30	97	97	96	98	93	93	98	102	99	94	100
	GR rate	rho				-0.042	0.365	-0.179	0.461	0.033	-0.574	-0.022	0.247	-0.435	-0.289	0.343	0.437
		p-value				0.824	< 0.001	0.080	< 0.001	0.749	< 0.001	0.831	0.014	< 0.001	0.004	0.001	< 0.001
		N				30	97	97	96	98	65	93	98	102	99	94	100

Table S2: Spearman Rank correlations of *V. cholerae* concentrations and global recovery rates with environmental variables in the soda pools (pooled data from 2011 and 2014). Ptot: total phosphorus, DOC: dissolved organic carbon, 250/365nm: 250 nm / 365 nm photometric ratio; CFU: colony forming units; GU: genomic units; significant correlations mentioned in the text are shaded with green.

Soda pools		qPCR uncorrected	cultivation	GR rate	CARD-FISH SPC	pH	Conductivity	oxygen	Ptot	Chlorophyll a	Temperature	DOC	250/365 nm	Secchi
qPCR corrected	rho	0.882	0.293	-0.676	0.633	0.329	0.358	-0.626	-0.088	0.219	0.868	0.437	0.637	-0.244
	p-value	< 0.001	0.037	< 0.001	0.020	0.018	0.010	< 0.001	0.554	0.131	< 0.001	0.002	< 0.001	0.087
	N	51	51	51	13	51	51	49	48	49	49	50	47	50
qPCR uncorrected	rho		0.276	-0.362	0.486	0.242	0.261	-0.548	-0.131	0.175	0.787	0.395	0.554	-0.141
	p-value		0.050	0.009	0.092	0.087	0.065	< 0.001	0.373	0.230	< 0.001	0.004	< 0.001	0.330
	N		51	51	13	51	51	49	48	49	49	50	47	50
Cultivation [log(CFU/100 ml)]	rho			-0.351	0.248	0.067	0.080	-0.443	0.072	0.077	0.292	0.189	0.32	-0.153
	p-value			0.012	0.415	0.638	0.576	0.001	0.625	0.599	0.042	0.189	0.028	0.287
	N			51	13	51	51	49	48	49	49	50	47	50
GR rate	rho				-0.291	-0.302	-0.262	0.514	0.026	-0.069	-0.596	-0.252	-0.484	0.194
	p-value				0.334	0.031	0.063	< 0.001	0.862	0.636	< 0.001	0.078	0.001	0.176
	N				13	51	51	49	48	49	49	50	47	50