Supplemental materials

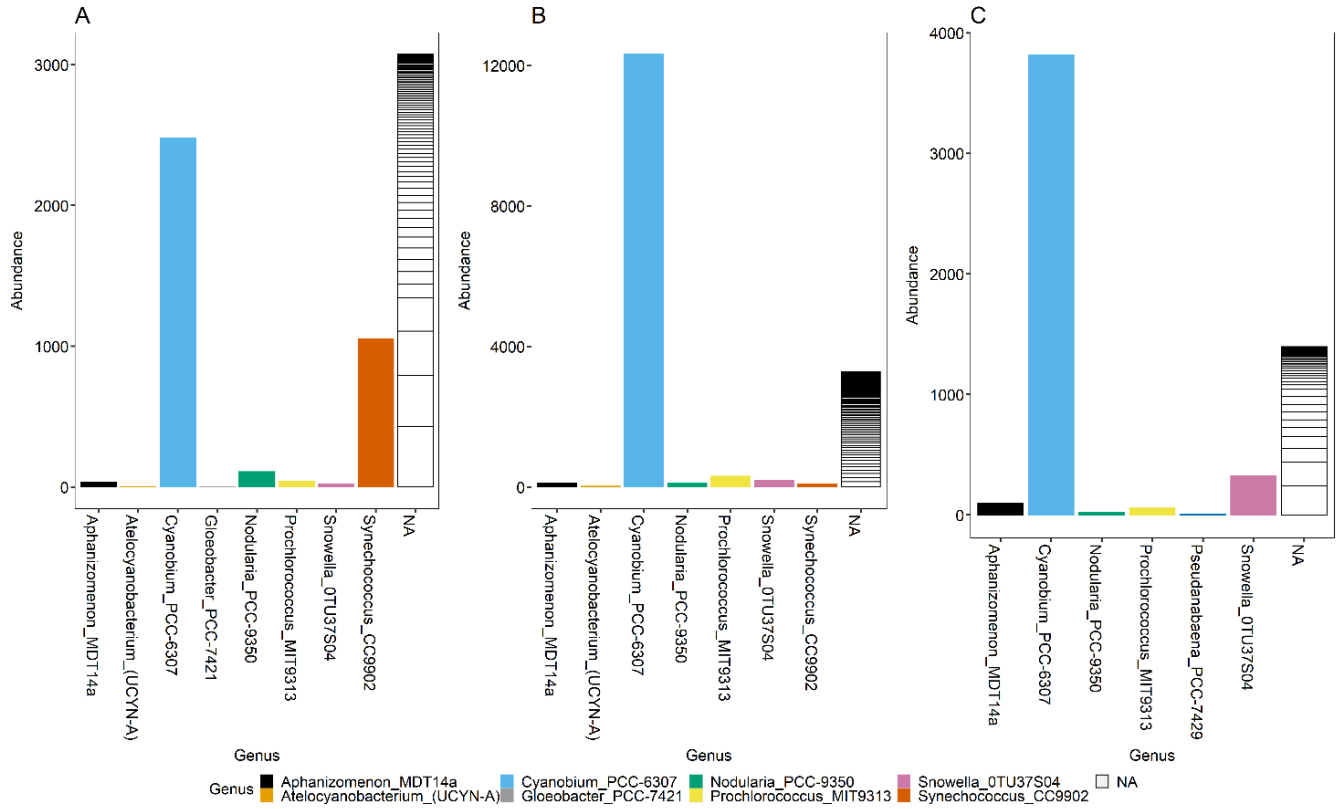

Figure S1 Relative abundance of identified cyanobacteria in the (A) Arkona Basin, (B) Bornholm Basin, and (C) Gotland Basin. Cyanobacteria were identified on genus level and are color coded as indicated in legend.

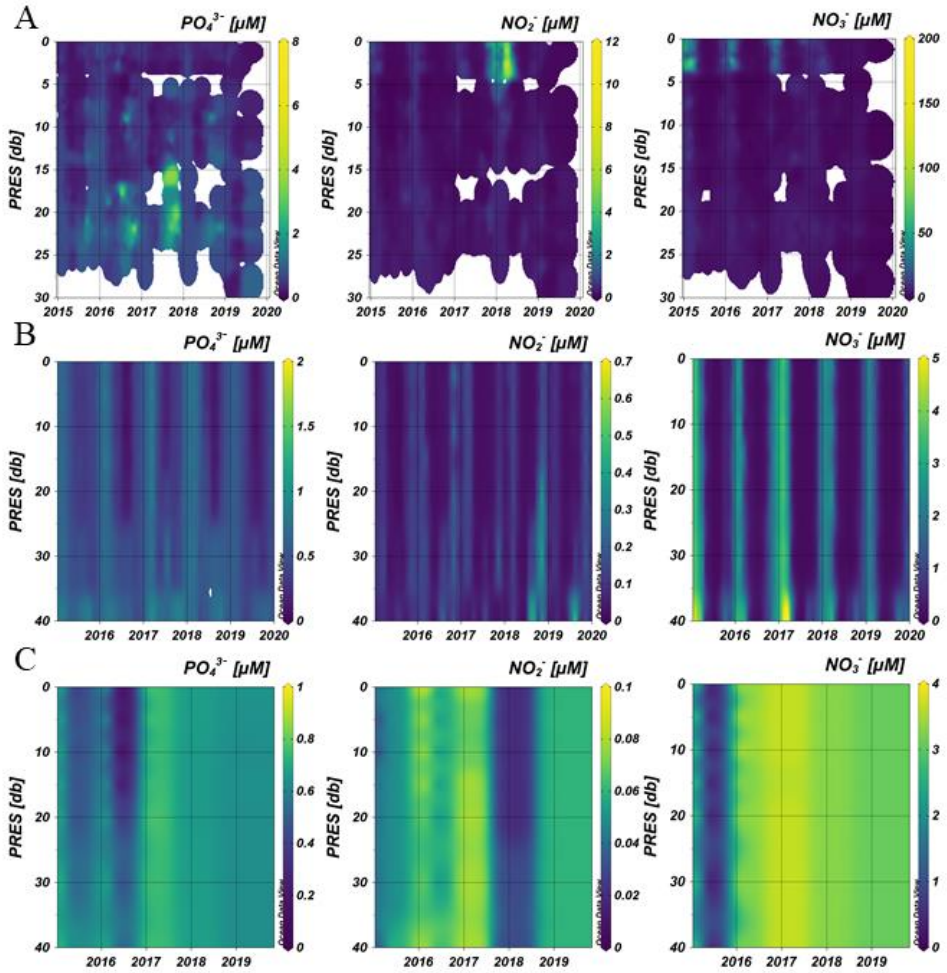

Figure S2 Nutrients records from 2015 to 2019 from the (A) Arkona, (B) Bornholm, and (C) East Gotland Basin (HELCOM stations, ICES Copenhagen, 2020).

Table S1 Overview of raw sample data, fixation rates, isotopes, and qPCR data used for statistical analyses.

Area	Depth (m)	Temp (°C)	Sal	pH	O_2 (µM)	DIC (mmol)	NO_X (µM)	NO_3^- (µM)	NO_2^- (µM)	PO_4^{3-} (µM)	N_2 fix (nmol N L^{-1} d^{-1})	CO_2 fix (nmol C L^{-1} d^{-1})	$\delta^{15}N$ (‰)	Gamma-PO (Copies L^{-1})	Gamma-AO (Copies L^{-1})	UCYN-A (Copies L^{-1})	Nodularia (Copies L^{-1})
KB06	3	15	18.74	8	244.5	1.9	NA	NA	NA	NA	0.67	50.10	3.60	1.36E+05	1.39E+05	4.52E+07	3.70E+05
KB06	5	15	19.13	7.96	255.1	1.9	0.85	0.01	0.84	0.18	1.64	57.16	3.59	3.76E+04	1.85E+05	1.67E+04	1.46E+06
KB06	10	15	21.83	7.23	149.1	1.9	NA	NA	NA	NA	2.00	68.31	4.95	9.45E+02	5.55E+04	6.05E+06	2.32E+06
H21	4	16	9.2	7.46	405.2	1.6	NA	NA	NA	NA	27.33	42.28	3.72	1.59E+03	1.78E+04	3.30E+06	5.77E+05
H21	6	16	9.2	7.52	436.4	1.6	NA	NA	NA	NA	1.66	51.88	4.02	8.21E+02	2.23E+04	9.98E+03	2.12E+06
H21	12	16	9.48	7.61	251.0	1.7	NA	NA	NA	NA	2.26	58.54	3.94	2.71E+04	2.56E+04	2.17E+06	6.52E+05
BB08	5	15	8.23	8.01	449.2	NA	NA	NA	NA	NA	3.36	33.73	4.57	2.36E+04	3.40E+04	3.91E+04	4.06E+07
BB08	10	13	8.27	8.03	256.9	NA	NA	NA	NA	NA	5.27	51.38	2.50	9.35E+03	9.03E+04	9.97E+07	3.46E+07
BB08	20	7	9.72	7.66	243.8	NA	NA	NA	NA	NA	0.69	5.35	2.93	9.18E+03	1.89E+04	8.37E+03	4.46E+06
BB15	7	13	8.27	NA	301.9	1.7	5.26	0.1	5.16	2.05	0	29.55	6.15	5.84E+04	7.96E+04	6.29E+05	1.48E+06
BB15	15	13	8.27	NA	309.8	1.7	NA	NA	NA	NA	0	26.73	5.33	1.54E+04	1.24E+04	2.17E+03	5.11E+04
BB15	41	12	8.29	NA	156.9	1.8	NA	NA	NA	NA	0	31.20	5.26	3.48E+03	4.90E+04	1.52E+05	8.64E+04
GB107	4	14	7.01	NA	402.7	NA	NA	NA	NA	NA	6.04	37.01	6.17	5.82E+02	2.73E+04	5.66E+04	8.06E+05
GB107	8	14	7.02	NA	431.4	NA	NA	NA	NA	NA	0	43.45	5.90	5.42E+02	6.76E+04	3.73E+03	1.60E+07
GB107	18	14	7.07	NA	209.8	NA	NA	NA	NA	NA	0.72	47.10	6.32	4.33E+02	2.42E+04	4.61E+04	5.01E+05