

Figure S1 Procedure used (a toy example) to estimate the bootstrap values of every node in the meta-metabolomic network tree. We started with an original data table containing the frequency of every (in column; n=5) for each sample (in row, k=5). The edge columns were resampled with replacement (3 replicates) to generate 3 bootstrap datasets, of which bootstrap Canberra distance data (Adkin form) and network trees were inferred subsequently. Samples S1 and S2 clustered as sister networks 2 times out of 3 bootstrap trees inferred, therefore this node has bootstrap value of 2/3 or 66%.

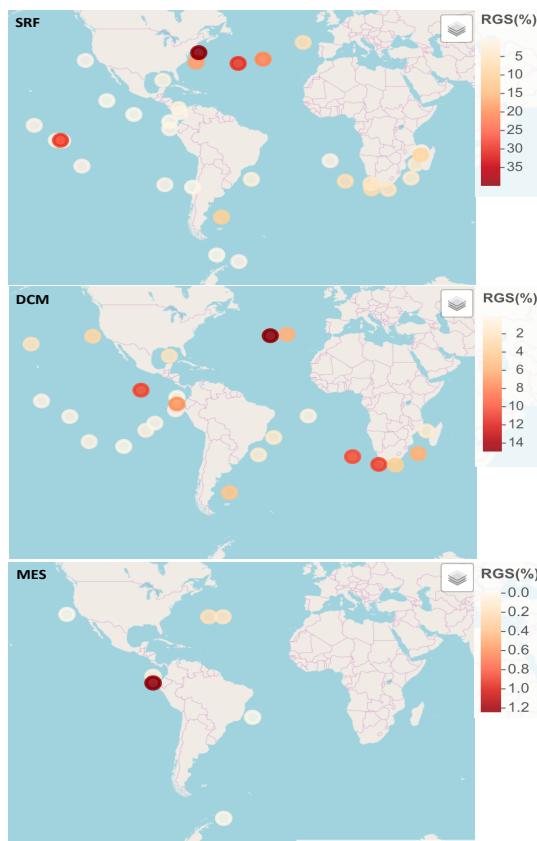


Figure S2 Global distribution pattern of PPEs with reduced genome size. Global distribution was examined in SRF (top panel), DCM (middle panel) and MES (Bottom panel). The MIX water layer was excluded from this analysis because of its small sample size ($n = 4$). The legends show the relative abundance 18S rRNA reads assigned to PPE genera with reduced genome size (RGS), consisting of *Bathycoccus* sp (15 Mb), *Micromonas* sp. (~21 Mb) and *Ostreococcus* sp. (13 Mb).

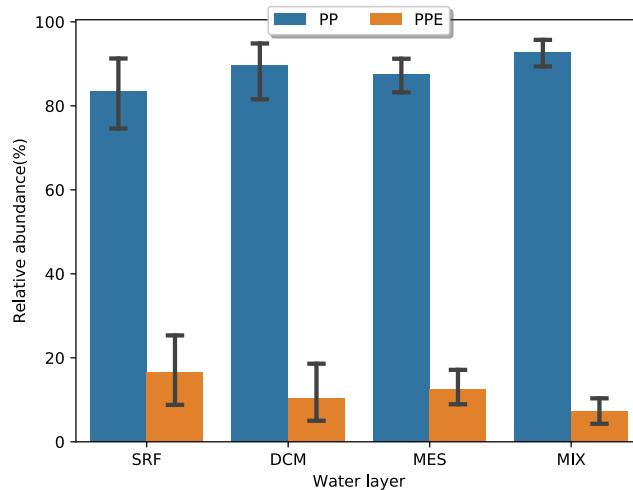


Figure S3 Contribution of marine photosynthetic picoeukaryotes (PPEs) and photosynthetic prokaryotes (PP) to the total picophytoplankton community in different water layers. The bar plot shows that PPs dominate the total picophytoplankton.

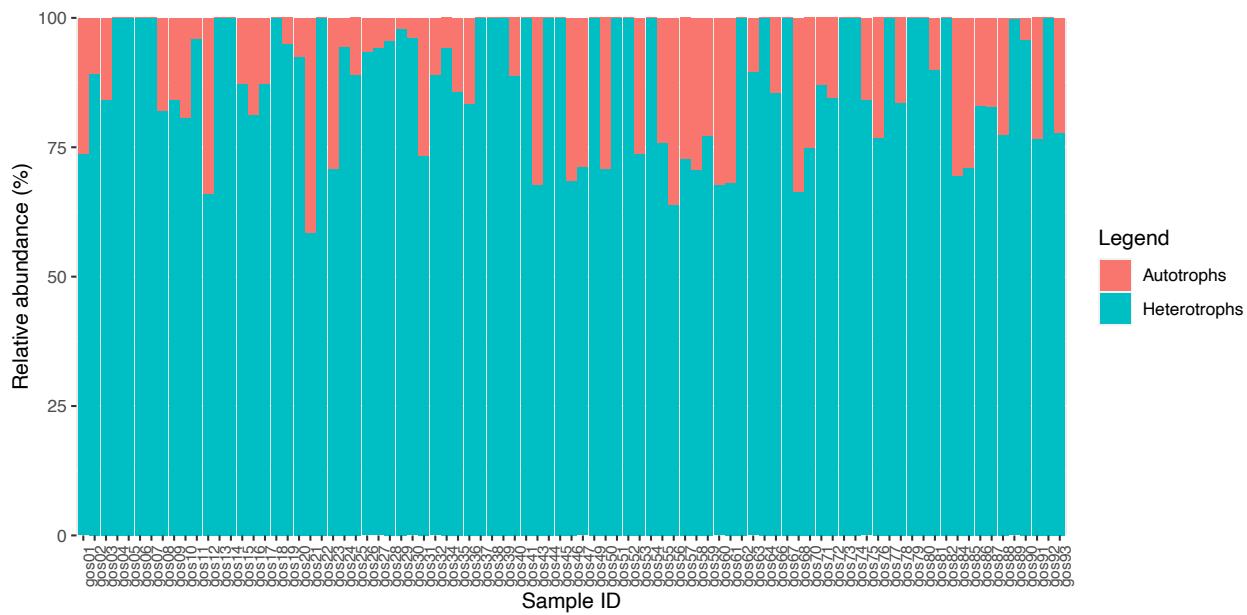


Figure S4 Abundance of autotrophic and heterotrophic bacterial cells in the Tara samples. The number of autotrophic and heterotrophic bacterial cells determined by cell flow cytometry, was retrieved from Tara Oceans website (<http://ocean-microbiome.embl.de/data/OM.CompanionTables.xlsx>). The number of heterotrophic cells is observed to be higher than the number of autotrophic cells in all samples.

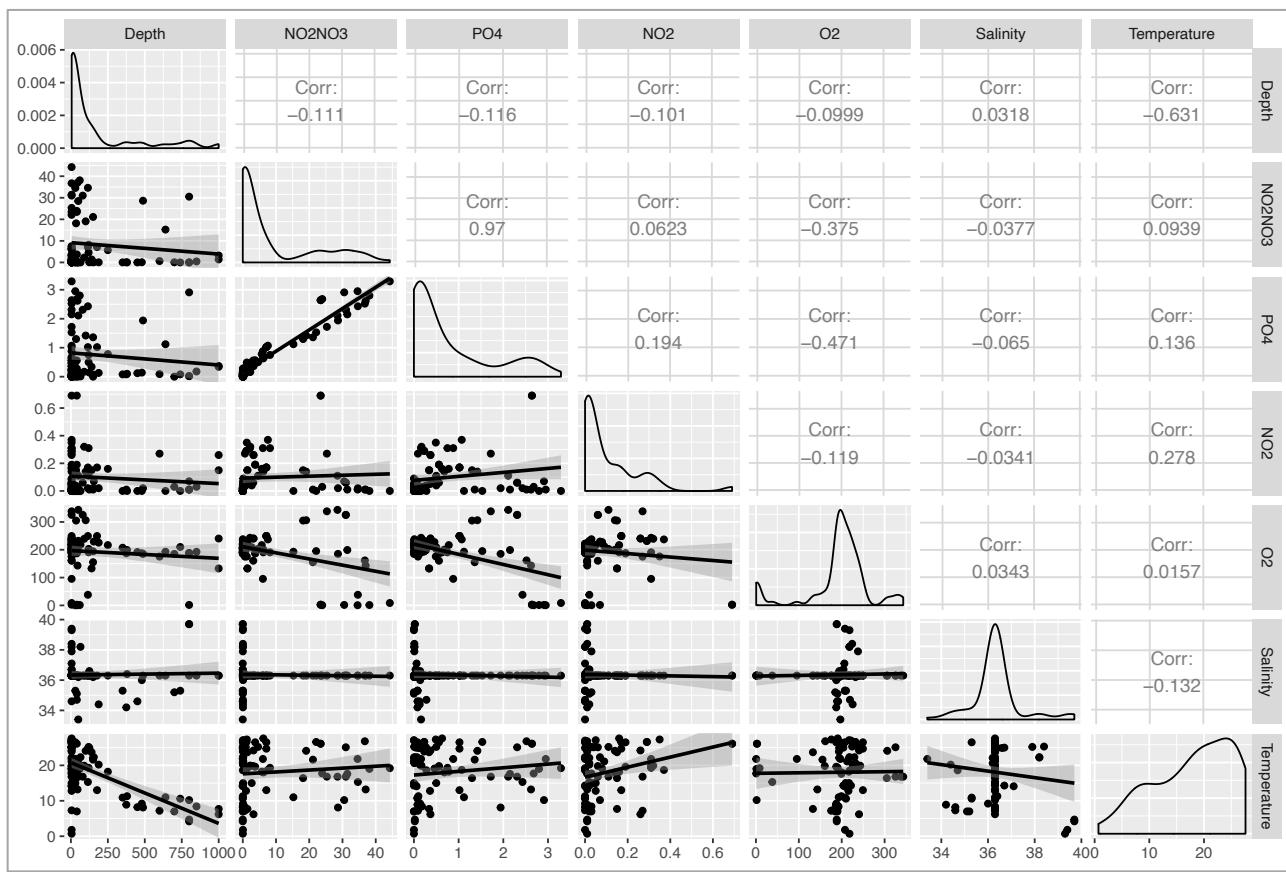


Figure S5 Intrinsic Correlation between environmental parameters. The strength of each pairwise correlation is reflected by the regression line (lower triangle panel) and the correlation coefficients (upper triangle panel). The distribution of the data in each variable is depicted by the density plots placed in the diagonals.

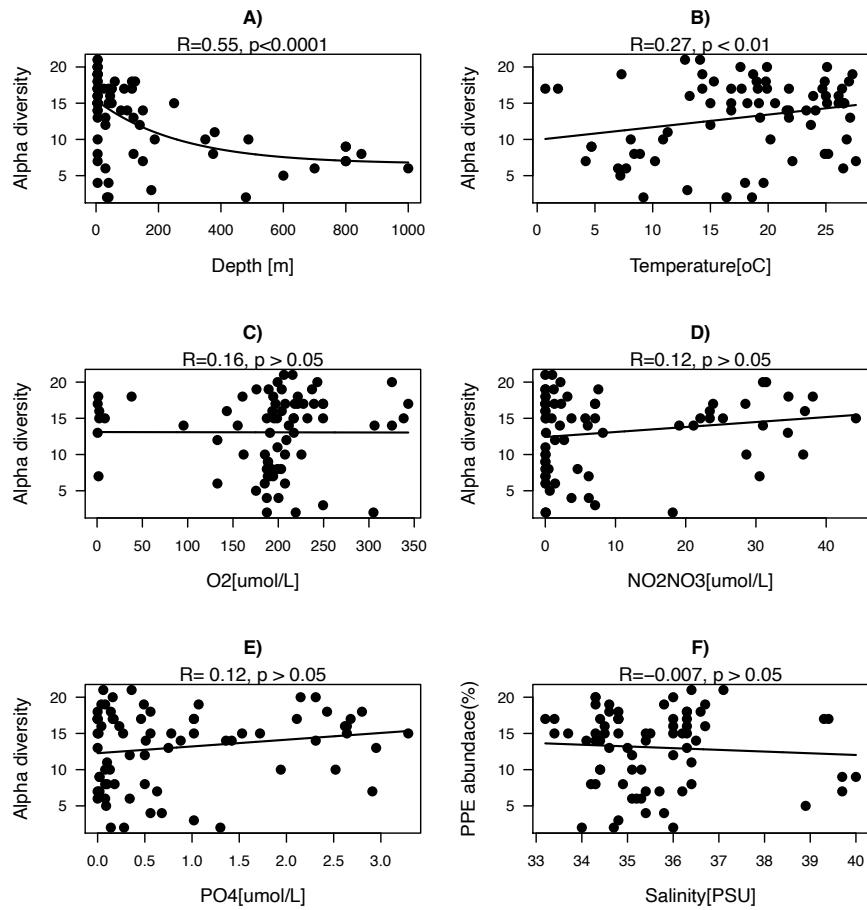


Figure S6 Correlation between PPE α -diversity and environmental variables. Environmental variables examined included sampling depth (A), water temperature (B), oxygen (C), nitrite + nitrate (D), phosphate (E), and salinity (F). PPE α -diversity exhibited a significant negative exponential correlation with sampling depth, and a positive correlation with water temperature. The correlation coefficient and p-values are given at the top of each subplot.

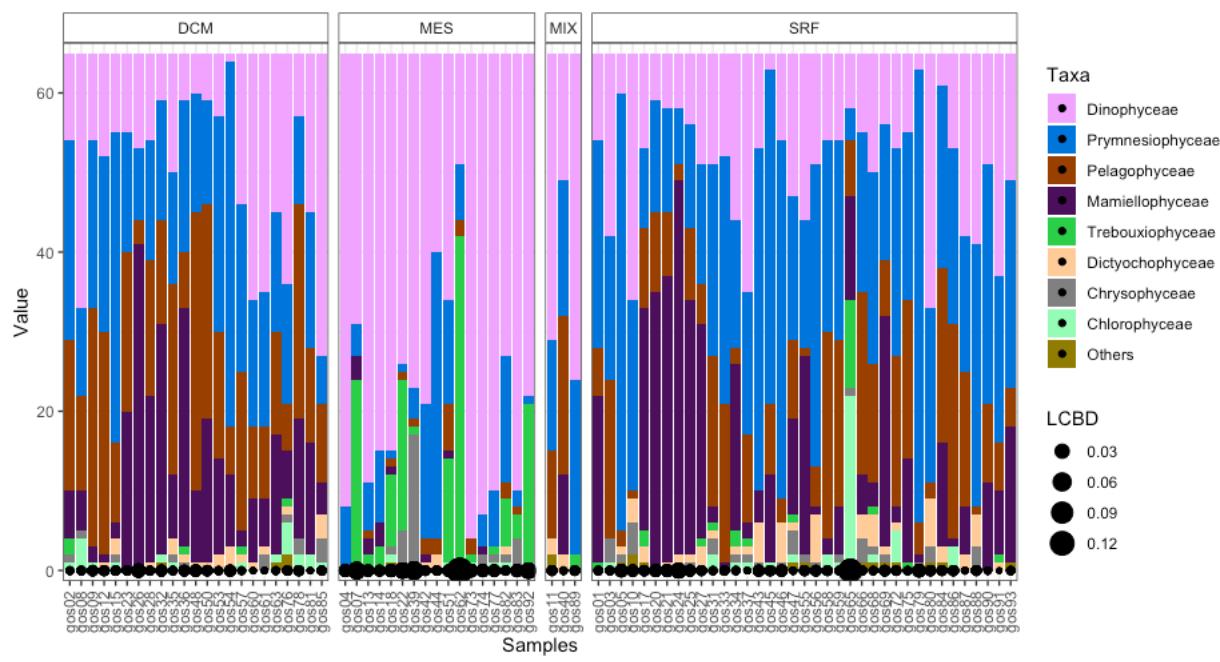


Figure S7 Taxonomic assignment and relative abundance of PPEs. The stacked bar plot shows the relative abundance (%) of 18S rRNA sequences assigned to known and previously identified PPE classes from different marine metagenomes. The samples are grouped by water column, and the diameter of the circles at the bottom of each stacked bar corresponds to LCBD (local contribution to β diversity) of each particular sample.

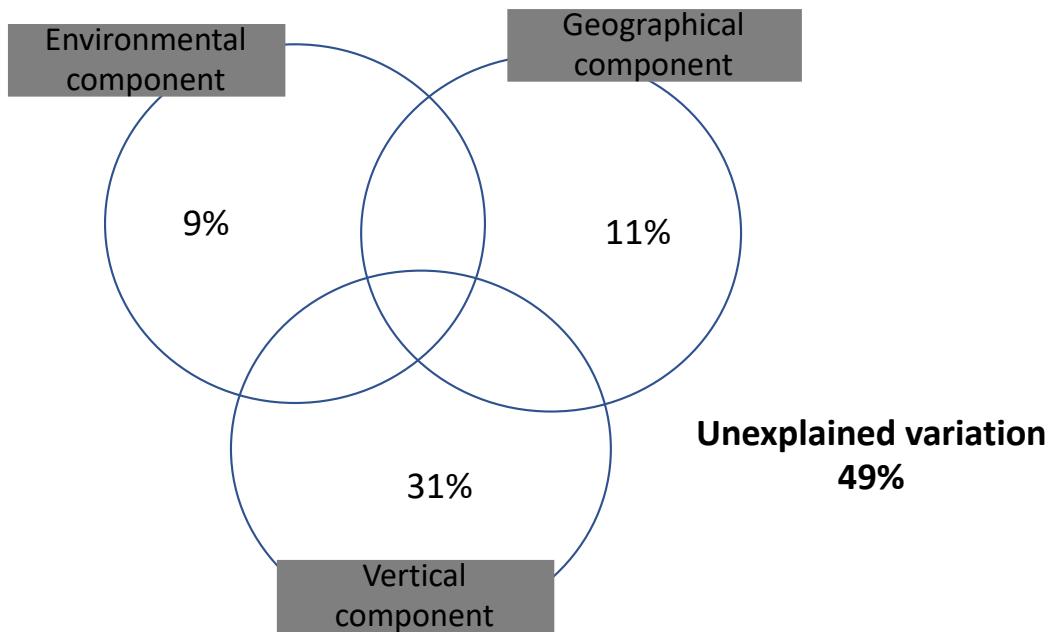


Figure S8 Variation partitioning (VPA) of PPE community using three-way PERMANOVA. The statistical test revealed that PPE distribution is explained significantly by vertical (depth) (31%, $p < 0.001$), geographical (11%, $p < 0.001$) and environmental components (9%). From all the environmental variables, only water temperature explained significantly the variation (4.44%, $p < 0.05$) observed in the PPE community assemblages. This PERMANOVA analysis is consistent with the CCA analysis indicating that water temperature and sampling depth are the most significant drivers shaping the PPE community structure. Additionally, it offers an insight showing the significant contribution of the geographical component in the variation of PPE assemblage.

Table S1 The number of 18S rRNA reads associated with the eukaryotic microbiome, including PPEs, in different metagenomic samples. Each sample is linked with the water layer and Geographical region where it was retrieved. Metagenomic samples used for the meta-metabolomic network analysis are identified with an asterisk (*)

Sample ID	Accession Number	Latitude	Longitude	18S rRNA (non-PPE)	18S rRNA (PPE)	Water layer	Station identifier	Geographical provinces	Pelagic biomes
gos01	ERR588857	-9.2	-140.5	2968	822	SRF	TARA_124	SPO	Trades Biome
gos02	ERR598942	35.4	-127.7	3950	899	DCM	TARA_133	NPO	Westerlies Biome
gos03	ERR598943	-5.3	-85.2	399	98	SRF	TARA_102	SPO	Trades Biome
gos04	ERR598944	43.7	-16.9	1718	90	MES	TARA_152	NAO	Westerlies Biome
gos05	ERR598945	-60.2	-60.6	3620	1253	SRF	TARA_084	SO	Polar Biome
gos06*	ERR598946	-13.0	-96.0	482	45	DCM	TARA_100	SPO	Trades Biome
gos07	ERR598947	-31.0	4.7	8359	198	MES	TARA_068	SAO	Trades Biome
gos08	ERR598948	-9.0	-139.1	3341	382	DCM	TARA_122	SPO	Trades Biome
gos09	ERR598952	2.0	-84.6	297	103	DCM	TARA_109	NPO	Coastal Biome
gos10	ERR598954	-23.3	-129.4	4604	665	SRF	TARA_112	SPO	Trades Biome
gos11	ERR598956	-8.9	-140.3	976	76	MIX	TARA_123	SPO	Trades Biome
gos12	ERR598957	-23.2	-129.5	5715	973	DCM	TARA_112	SPO	Trades Biome
gos13	ERR598958	34.2	-57.0	8288	393	MES	TARA_148 b	NAO	Westerlies Biome
gos14	ERR598960	-35.2	26.3	3693	121	MES	TARA_065	IO	Coastal Biome
gos15	ERR598961	-17.0	-100.7	2735	574	DCM	TARA_111	SPO	Trades Biome
gos16	ERR598962	-5.3	-85.3	160	36	DCM	TARA_102	SPO	Trades Biome
gos17	ERR598963	34.1	-49.9	7505	2024	SRF	TARA_149	NAO	Westerlies Biome
gos18	ERR598964	34.1	-49.8	5623	226	MES	TARA_149	NAO	Westerlies Biome
gos19*	ERR598965	-33.9	-73.1	137	14	DCM	TARA_093	SPO	Coastal Biome
gos20	ERR598968	34.7	-71.3	2532	858	SRF	TARA_146	NAO	Westerlies Biome
gos21	ERR598970	-29.5	38.0	537	233	SRF	TARA_064	IO	Coastal Biome
gos22	ERR598971	2.1	-84.6	7714	164	MES	TARA_109	NPO	Coastal Biome
gos23*	ERR598972	-29.5	37.9	1085	493	DCM	TARA_064	IO	Coastal Biome

gos24	ERR598973	-34.9	17.9	745	306	SRF	TARA_066	SAO	Coastal Biome
gos25	ERR598979	-35.2	26.3	901	291	SRF	TARA_065	IO	Coastal Biome
gos26*	ERR598982	-34.9	18.0	1070	382	DCM	TARA_066	SAO	Coastal Biome
gos27	ERR598983	39.2	-70.0	8799	3028	SRF	TARA_145	NAO	Westerlies Biome
gos28	ERR598986	36.2	-28.9	2639	456	DCM	TARA_151	NAO	Westerlies Biome
gos29*	ERR598987	14.2	-116.6	108	12	DCM	TARA_137	NPO	Trades Biome
gos30	ERR598988	-9.1	-140.6	470	63	MIX	TARA_124	SPO	Trades Biome
gos31	ERR598989	14.2	-116.6	1577	561	SRF	TARA_137	NPO	Trades Biome
gos32	ERR598990	-35.2	26.3	1379	307	DCM	TARA_065	IO	Coastal Biome
gos33	ERR598992	-9.0	-139.2	1560	688	SRF	TARA_122	SPO	Trades Biome
gos34	ERR598994	-32.2	17.7	2117	661	SRF	TARA_067	SAO	Coastal Biome
gos35	ERR598995	31.5	-159.0	2845	484	DCM	TARA_132	NPO	Westerlies Biome
gos36*	ERR598996	35.8	-37.2	3023	1201	DCM	TARA_150	NAO	Westerlies Biome
gos37	ERR598997	2.0	-84.6	316	65	SRF	TARA_109	NPO	Coastal Biome
gos38	ERR598999	-9.0	-139.2	1264	62	MES	TARA_122	SPO	Trades Biome
gos39	ERR599000	-20.9	-35.2	4017	180	MES	TARA_076	SAO	Trades Biome
gos40	ERR599001	43.7	-16.9	2115	519	MIX	TARA_152	NAO	Westerlies Biome
gos41	ERR599004	6.4	-103.1	936	23	MES	TARA_138	NPO	Trades Biome
gos42	ERR599005	-8.8	-17.9	2079	148	MES	TARA_072	SAO	Trades Biome
gos43	ERR599006	-30.1	-43.3	5519	1858	SRF	TARA_078	SAO	Trades Biome
gos44	ERR599008	-62.0	-49.5	1246	278	MES	TARA_085	SO	Polar Biome
gos45	ERR599009	-47.2	-58.3	4971	4014	SRF	TARA_082	SAO	Coastal Biome
gos46	ERR599010	-20.9	-35.2	1757	526	SRF	TARA_076	SAO	Trades Biome
gos47	ERR599012	-22.3	40.3	2405	568	SRF	TARA_062	IO	Coastal Biome
gos48	ERR599014	-1.9	-84.6	4799	1113	DCM	TARA_110	SPO	Trades Biome
gos49	ERR599015	14.2	-116.6	428	42	MES	TARA_137	NPO	Trades Biome
gos50*	ERR599017	-31.0	4.7	2169	1497	DCM	TARA_068	SAO	Trades Biome
gos51	ERR599020	-1.9	-84.6	2571 1	579	MES	TARA_110	SPO	Trades Biome

gos52	ERR599021	-29.5	38.0	1424	53	MES	TARA_064	IO	Coastal Biome
gos53	ERR599026	-17.3	42.3	1425	440	DCM	TARA_058	IO	Coastal Biome
gos54*	ERR599027	-47.2	-57.9	1131	1070	DCM	TARA_082	SAO	Coastal Biome
gos55	ERR599029	9.8	-80.0	930	203	SRF	TARA_141	NAO	Coastal Biome
gos56	ERR599030	6.3	-102.9	3049	519	SRF	TARA_138	NPO	Trades Biome
gos57	ERR599032	0.0	-153.7	3694	554	DCM	TARA_128	SPO	Trades Biome
gos58	ERR599038	0.0	-153.7	2674	952	SRF	TARA_128	SPO	Trades Biome
gos59	ERR599039	-2.0	-84.6	2047	682	SRF	TARA_110	SPO	Trades Biome
gos60	ERR599040	-21.0	-35.3	2271	315	DCM	TARA_076	SAO	Trades Biome
gos61*	ERR599042	-25.8	-111.7	734	75	DCM	TARA_098	SPO	Trades Biome
gos62	ERR599044	-20.4	-3.2	4813	122	MES	TARA_070	SAO	Trades Biome
gos63	ERR599046	-30.1	-43.3	1063	236	DCM	TARA_078	SAO	Trades Biome
gos64	ERR599047	34.7	-71.3	1258	46	MES	TARA_146	NAO	Westerlies Biome
gos65	ERR599050	-32.8	-87.1	728	101	SRF	TARA_094	SPO	Trades Biome
gos66	ERR599052	35.4	-127.7	1249	337	SRF	TARA_133	NPO	Westerlies Biome
gos67	ERR599055	-5.3	-85.2	660	13	MES	TARA_102	SPO	Trades Biome
gos68	ERR599057	-15.3	43.3	2636	480	SRF	TARA_056	IO	Coastal Biome
gos69	ERR599058	-17.0	42.7	1628	757	SRF	TARA_057	IO	Coastal Biome
gos70	ERR599063	-13.0	-96.0	107	17	SRF	TARA_100	SPO	Trades Biome
gos71	ERR599064	-34.1	-73.1	88	13	SRF	TARA_093	SPO	Coastal Biome
gos72	ERR599066	-8.9	-142.6	487	178	SRF	TARA_125	SPO	Trades Biome
gos73	ERR599071	-25.8	-111.7	1872	117	MES	TARA_098	SPO	Trades Biome
gos74	ERR599072	-23.2	-129.6	2735	110	MES	TARA_112	SPO	Trades Biome
gos75	ERR599078	43.7	-16.8	3003	1095	SRF	TARA_152	NAO	Westerlies Biome
gos76	ERR599081	-13.0	-96.0	2160	205	DCM	TARA_100	SPO	Trades Biome
gos77	ERR599086	-16.9	-100.7	3663	195	MES	TARA_111	SPO	Trades Biome
gos78	ERR599087	6.3	-103.0	5984	1016	DCM	TARA_138	NPO	Trades Biome
gos79	ERR599090	-62.0	-49.5	6740	5862	SRF	TARA_085	SO	Polar Biome

gos80	ERR599093	-25.8	-111.7	1685	315	SRF	TARA_098	SPO	Trades Biome
gos81	ERR599100	25.6	-88.5	3107	645	DCM	TARA_142	NAO	Coastal Biome
gos82	ERR599112	-15.3	43.3	4214	193	MES	TARA_056	IO	Coastal Biome
gos83	ERR599115	35.3	-127.7	1579 0	487	MES	TARA_133	NPO	Westerlies Biome
gos84	ERR599129	-31.0	4.7	1086	951	SRF	TARA_068	SAO	Trades Biome
gos85*	ERR599133	-8.7	-18.0	2022	179	DCM	TARA_072	SAO	Trades Biome
gos86	ERR599135	-20.4	-3.2	2108	972	SRF	TARA_070	SAO	Trades Biome
gos87	ERR599136	25.5	-88.4	2401	564	SRF	TARA_142	NAO	Coastal Biome
gos88	ERR599142	31.5	-159.0	3398	706	SRF	TARA_132	NPO	Westerlies Biome
gos89	ERR599156	-8.9	-142.5	6567	247	MIX	TARA_125	SPO	Trades Biome
gos90	ERR599160	-8.9	-140.3	6190	2940	SRF	TARA_123	SPO	Trades Biome
gos91	ERR599162	7.4	-79.3	1724	219	SRF	TARA_140	NPO	Coastal Biome
gos92	ERR599166	39.2	-70.0	7545	176	MES	TARA_145	NAO	Westerlies Biome
gos93	ERR599170	35.9	-37.3	4845	1835	SRF	TARA_150	NAO	Westerlies Biome

Table S2 Metadata associated with the 93 Tara Ocean metagenomes analyzed

Sample ID	Depth [M]	NO₂NO₃ [μmol/L]	PO₄ [μmol/L]	NO₂ [μmol/L]	NO₃ [μmol/L]	O₂ [μmol/L]	Salinity [PSU]	Temperature [°C]
gos01	5	7.09	1.02	0.17	0.4	249.4	36.3	26.5
gos02	45	36.98	2.62	0.01	38.4	143.2	36.3	13.2
gos03	5	0.02	0.1	0	0.3	199.1	36.4	24.9
gos04	800	30.52	2.91	0.07	31.8	1.6	36.3	10.2
gos05	5	0.05	0	0	-0.7	207.6	39.4	1.8
gos06*	177	7.09	1.02	0.17	0.4	249.4	36.3	13
gos07	700	0.06	0	0.03	0.8	185	35.2	7
gos08	115	7.09	1.02	0.17	0.4	249.4	36.3	24.7
gos09	30	0.02	0.08	0	-0.1	207.4	35.3	26.5
gos10	5	3.23	0.37	0.26	NAN	240.4	36.3	24.2
gos11	150	0.05	0	0.02	-2.2	194.3	36.2	22.1
gos12	155	0.15	0.07	0.07	NAN	229.5	36.3	22.3
gos13	250	5.7	0.78	0.16	1.5	216.8	36.3	18.2
gos14	850	0.47	0.18	0.03	0.2	192.6	36.3	8.4
gos15	90	2.26	0.17	0.32	3.8	239.4	36.3	19.9
gos16	40	3.73	0.56	0.19	5	187.3	36.3	19.6
gos17	5	7.55	1.07	0.37	0.7	237.2	36.3	18.7
gos18	740	0	0.08	0	NAN	210	35.3	10.6
gos19*	35	18.15	1.3	0.15	17.1	305	36.3	16.4
gos20	5	1.3	0.46	0.08	4.8	227.7	36.3	19.1
gos21	5	0.03	0.01	0	NAN	218	38.2	22.2
gos22	380	0.02	0.1	0	0.3	199.1	36.4	11.3
gos23	65	0.03	0.01	0	NAN	218	38.2	22.3
gos24	5	0.1	0	0.05	0.5	217.1	36.3	15
gos25	5	6.05	0.88	0.31	11	95.4	36.3	21.8
gos26	30	2.68	0.5	0.04	2.6	208.9	36.3	15
gos27	5	0	0.06	0	0	206.2	37.1	14.1
gos28	80	31	2.31	0.06	33.1	325.4	36.3	16.8
gos29	40	0.03	0.28	0	-0.4	219.2	34.7	18.6
gos30	120	4.6	0.5	0.11	3.9	203.1	36.3	25.2
gos31	5	7.09	1.02	0.17	0.4	249.4	36.3	26.4
gos32	30	34.55	2.95	0.01	35.7	0.6	36.3	21.8
gos33	5	3.73	0.56	0.19	5	187.3	36.3	26.5
gos34	5	0.99	0.36	0.05	0.2	215.7	36.3	12.8
gos35	115	34.63	2.43	0.02	42.5	38.1	36.3	15.3
gos36	40	23.9	2.68	0.03	21.1	0.7	36.3	17.7
gos37	5	6.18	0.63	0.16	5.1	190.7	36.3	27.6
gos38	600	0.64	0.09	0.27	0.1	175.4	36.3	7.2
gos39	800	0	0.02	0.01	-0.5	188.4	39.7	4.7
gos40	25	0.02	0	0	-0.4	221.5	36.3	14.3
gos41	450	0	0.12	0	NAN	191.7	34.6	8.2
gos42	800	0.03	0.02	0.01	-0.1	188.8	40	4.7
gos43	5	2.16	0.16	0.31	3	243.1	36.3	19.9
gos44	790	0.02	0.01	0.03	NAN	237.9	37.9	0.5
gos45	5	0.03	0.08	0	-1.5	189.3	34.6	7.3
gos46	5	2.08	0.51	0.51	0.4	211.6	36.3	23.3
gos47	5	31	2.31	0.06	33.1	325.4	36.3	25.1
gos48	50	0	0.16	0	-1.2	196.9	33.4	21.8
gos49	375	0.06	0.08	0.01	-2.2	187.3	34.2	8.9
gos50	50	28.5	2.11	0.11	27.5	343.4	36.3	16.8

gos51	380	NAN	NAN	NAN	NAN	88.2	36.3	10.3
gos52	1000	1.39	0.34	0.15	0.6	132.8	36.3	7.7
gos53	66	0.08	0.02	0.02	NAN	NAN	37.8	25.3
gos54	40	0	0	0.02	NAN	190.1	35.1	7
gos55	5	0.1	0	0.05	0.5	217.1	36.3	27.1
gos56	5	1.08	0.23	0.29	NAN	231.7	36.3	26.6
gos57	40	23.43	2.64	0.69	22.4	2.4	36.3	26.1
gos58	5	23.43	2.64	0.69	22.4	2.4	36.3	26.1
gos59	5	0.03	0.23	0.01	-1.4	193.4	36.3	23.9
gos60	150	21.11	1.36	0.01	21.3	155.2	36.3	21.6
gos61	188	0.05	0.13	0.02	0.7	225.5	34.4	20.2
gos62	800	0	0.02	0.01	-0.5	188.4	39.7	4.2
gos63	120	8.2	0.75	0.31	6.7	190.8	36.3	19.3
gos64	640	15.24	1.12	0	NAN	193	36.3	11
gos65	5	0.15	0	0.09	NAN	212.6	36.3	21.1
gos66	5	44.24	3.29	0	44.1	8.6	36.3	19.2
gos67	480	0.09	0.14	0	-1.3	187.4	36	9.2
gos68	5	1.21	0.49	0.35	4.5	175.9	36.3	27.3
gos69	5	0.02	0	0	-0.4	221.5	36.3	27
gos70	5	0.05	0.01	0.01	NAN	224.3	38.4	25.3
gos71	5	6.2	0.68	0.14	4.6	200.2	36.3	18
gos72	5	36.73	2.52	0.01	37.8	161.7	36.3	26.8
gos73	488	28.64	1.94	0.02	2.6	185.2	36.3	8.1
gos74	696	NAN	NAN	NAN	NAN	206.4	36.3	5.8
gos75	5	0	0.04	0.02	0.6	203.8	36.7	14.3
gos76	50	0.02	0.01	0.02	0.3	232.1	36.2	20.6
gos77	350	0.02	0.08	0	-0.1	207.4	35.3	10.9
gos78	60	38.1	2.8	0	34.6	1.3	36.3	19
gos79	5	0.02	0	0.01	0.3	218.1	39.3	0.7
gos80	5	0.9	0.27	0.04	1.2	198.6	36.3	25.1
gos81	125	0.04	0.14	0.01	0.2	194.4	36.6	24.9
gos82	1000	3.23	0.37	0.26	NAN	240.4	36.3	6.2
gos83	650	0.03	0.01	0	NAN	NAN	NAN	4.9
gos84	5	25.3	1.72	0.27	24.4	338.3	36.3	16.8
gos85	100	19.07	1.42	0.14	17.1	306.2	36.3	24.1
gos86	5	3.15	0.56	0.06	3.7	160.5	36.3	19.8
gos87	5	0	0.04	0.02	0.6	203.8	36.7	25
gos88	5	0.02	0.01	0.03	NAN	237.9	37.9	25.2
gos89	140	1.39	0.34	0.15	0.6	132.8	36.3	23.7
gos90	5	1.08	0.23	0.29	NAN	231.7	36.3	26.6
gos91	5	22.08	1.53	0	25.8	195.2	36.3	26.6
gos92	590	NAN	NAN	NAN	NAN	207	36.3	5.1
gos93	5	31.46	2.15	0.01	29.2	199.2	36.3	17.6

Table S3 Pairwise t-test of PPE abundance between geographical regions and seawater layer based on 95% confidence interval

Geographical regions		Water layers	
Regions	p-value	Water layer	p-value
NAO-IO	1.000	MES-DCM	0.000
NPO-IO	0.708	MIX-DCM	0.488
SAO-IO	0.334	SRF-DCM	0.067
SO-IO	0.029	MIX-MES	0.148
SPO-IO	0.738	SRF-MES	0.000
NPO-NAO	0.783	SRF-MIX	0.045
SAO-NAO	0.118		
SO-NAO	0.015		
SPO-NAO	0.810		
SAO-NPO	0.004		
SO-NPO	0.002		
SPO-NPO	1.000		
SO-SAO	0.287		
SPO-SAO	0.001		
SPO-SO	0.002		

Table S4 Spearman correlation between percentage of metagenomic 18S rRNA sequences assigned to PPEs with reduced genome size (in column) and the environmental parameters (in row). The Spearman coefficient (R) of each correlation is provided followed by the statistical significance which, is reported with three asterisks ($p < 0.001$), two asterisks ($p < 0.01$), and one asterisk ($p < 0.05$).

	<i>Ostreococcus</i>	<i>Micromonas</i>	<i>Bathycoccus</i>
Depth	-0.27, ***	-0.53, ***	-0.23, *
Temperature	0.13	0.17	-0.02
PO4	0.21, *	0.04	0.20
NO2	-0.01	0.06	-0.02
NO2NO3	0.19	0.08	0.19
O2	0.03	0.23, *	0.15
Salinity	0.07	0.19	0.03

Table S5 Number of (a) unique and (b) total edges in each of the 10 metagenomic datasets displayed in Figure 9

a) Number of unique reactions in each sample

Sample ID	Number of Unique edges (reactions)
gos06	870
gos19	905
gos23	984
gos26	956
gos29	799
gos36	1066
gos50	975
gos54	921
gos61	940
gos85	994

b) Number of edges in each sample

Sample ID	Number of edges (reactions)
gos06	381308
gos19	554181
gos23	324475
gos26	219638
gos29	189027
gos36	1011305
gos50	420765
gos54	239795
gos61	180503
gos85	432492

Table S6 Pearson's correlation between the relative proportion of PPE classes (in row) and the environmental variables (in column). The Pearson coefficient (R) of each correlation is provided followed by the statistical significance which, is reported with three asterisks ($p < 0.001$), two asterisks ($p < 0.01$), and one asterisk ($p < 0.05$).

Taxa/Variables	Depth	NO2+NO3	PO4	NO2	O2	Temperature	Salinity
<i>Chlorophyceae</i>	-0.08	0.13	0.2	0.1	-0.16	-0.06	0.05
<i>Chrysophyceae</i>	0.12	-0.1	-0.05	-0.11	-0.1	-0.06	-0.07
<i>Dictyochophyceae</i>	-0.38***	0.06		0.02	0.12	0.19	0.3***
<i>Dinophyceae</i>	0.62***	-0.07		0	-0.03	0	-0.13
<i>Eustigmatophyceae</i>	-0.28**	-0.04		-0.02	0.07	0.21*	0.29**
<i>Mamiellophyceae</i>	-0.42***	0.19		0.13	0.05	0.14	0.2
<i>Pelagophyceae</i>	-0.41***	0.22*		0.22*	0.09	-0.05	0.47***
<i>Prymnesiophyceae</i>	-0.62***	0		0	0.19	0.15	0.45***
<i>Trebouxiophyceae</i>	0.43***	-0.15		-0.07	-0.13	-0.08	-0.2
							-0.03

Table S7 Akaike Information Criterion (AIC) goodness-of-fit values for multiple regression models of the variation in number of 18S rRNA reads assigned to PPEs with oceanic sampling depth (Figure 2).

Function	AIC
Linear ($y=a*x+b$)	608.44
Logarithmic($y=a*\ln(x)+b$)	597.97
Exponential($y=a*\exp(b*x)$)	591.84
Power law($y=a*x^b$)	604.52