

Table S1. Bivariate correlation (Pearson's r) between the variables considered. DIST: distance to the land, BATH: bathymetry, FRONT: ocean frontal activity, Current: ocean current, NPP: Net Primary Production, SST: Sea Surface Temperature, Calcite, Cloud: cloud cover, DA: diffuse attenuation, DO: dissolved oxygen, Nitrate: nitrate concentration, PAR: photosynthesis available radiation, PHOS: phosphate concentration, SALIN: salinity, SICL: silicate.

	DIST	BATH	FRONT	Current	NPP	SST	Calcite	Cloud	DA	DO	Nitrate	Par	pH	PHOS	SALIN	SICL
DIST	1.00	-0.60	0.25	0.22	-0.54	0.20	-0.48	0.35	-0.57	0.04	-0.15	0.06	-0.06	-0.04	0.22	-0.17
BATH	-0.60	1.00	-0.07	-0.57	0.53	-0.34	0.47	-0.55	0.56	0.17	0.05	-0.02	-0.06	0.11	-0.27	0.11
FRONT	0.25	-0.07	1.00	0.12	-0.19	-0.10	-0.30	-0.22	-0.29	0.12	-0.18	0.01	-0.19	0.09	0.04	-0.11
Current	0.22	-0.57	0.12	1.00	-0.43	0.38	-0.38	0.37	-0.47	-0.32	0.06	0.09	0.20	-0.14	0.26	-0.06
NPP	-0.54	0.53	-0.19	-0.43	1.00	-0.58	0.65	-0.40	0.94	0.46	0.16	-0.44	-0.39	0.49	-0.69	0.32
SST	0.20	-0.34	-0.10	0.38	-0.58	1.00	-0.18	0.14	-0.51	-0.86	0.11	0.78	0.78	-0.74	0.68	-0.12
Calcite	-0.48	0.47	-0.30	-0.38	0.65	-0.18	1.00	-0.30	0.76	0.15	0.13	-0.19	0.01	0.18	-0.36	0.18
Cloud	0.35	-0.55	-0.22	0.37	-0.40	0.14	-0.30	1.00	-0.38	-0.02	0.21	-0.32	0.09	0.13	-0.01	-0.02
Da	-0.57	0.56	-0.29	-0.47	0.94	-0.51	0.76	-0.38	1.00	0.40	0.13	-0.39	-0.31	0.42	-0.63	0.28
DO	0.04	0.17	0.12	-0.32	0.46	-0.86	0.15	-0.02	0.40	1.00	-0.08	-0.76	-0.66	0.75	-0.67	0.21
Nitrate	-0.15	0.05	-0.18	0.06	0.16	0.11	0.13	0.21	0.13	-0.08	1.00	-0.07	0.20	0.37	-0.30	0.77
Parmean	0.06	-0.02	0.01	0.09	-0.44	0.78	-0.19	-0.32	-0.39	-0.76	-0.07	1.00	0.65	-0.83	0.70	-0.19
pH	-0.06	-0.06	-0.19	0.20	-0.39	0.78	0.01	0.09	-0.31	-0.66	0.20	0.65	1.00	-0.68	0.58	-0.01
PHOS	-0.04	0.11	0.09	-0.14	0.49	-0.74	0.18	0.13	0.42	0.75	0.37	-0.83	-0.68	1.00	-0.85	0.43
Salinity	0.22	-0.27	0.04	0.26	-0.69	0.68	-0.36	-0.01	-0.63	-0.67	-0.30	0.70	0.58	-0.85	1.00	-0.29
Silicate	-0.17	0.11	-0.11	-0.06	0.32	-0.12	0.18	-0.02	0.28	0.21	0.77	-0.19	-0.01	0.43	-0.29	1.00