**Supplementary material to article:**

Modelling dynamic processes in the Black Sea pelagic habitat -casual connections between abiotic and biotic factors in two climate change scenarios

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**Table S1**. Descriptive statistics of physico-chemical parameters, nutrients, phytoplankton, and zooplankton – warm season, 2008-2018

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | N | Average | Median | Min. | Max. | 25th percentile | 75th percentile | Std. dev |
| T[oC] | 7950 | 21.80 | 21.80 | 13.50 | 28.00 | 19.06 | 24.80 | 3.51 |
| S[‰] | 7950 | 13.40 | 14.39 | 0.11 | 20.00 | 11.75 | 15.90 | 3.83 |
| O2[µM] | 7950 | 328.6 | 323.9 | 194.3 | 496.0 | 287.6 | 368.0 | 55.0 |
| PO4[µM] | 7950 | 0.30 | 0.27 | 0.01 | 3.00 | 0.14 | 0.40 | 0.36 |
| SiO4[µM] | 7950 | 9.6 | 4.7 | 0.1 | 88.0 | 2.2 | 10.7 | 13.0 |
| NO2[µM] | 7861 | 1.63 | 0.34 | 0.03 | 42.26 | 0.14 | 0.94 | 5.18 |
| NO3[µM] | 7861 | 5.86 | 3.04 | 0.01 | 59.23 | 1.61 | 5.59 | 8.56 |
| NH4[µM] | 7861 | 8.39 | 5.99 | 0.12 | 53.62 | 2.96 | 12.08 | 7.63 |
| Phytoplankton. Total density [cel/L] | 7956 | 420811 | 46460 | 100 | 16267400 | 18240 | 142500 | 1225776 |
| Phytoplankton. Total biomass [mg/m3] | 7956 | 536.40 | 231.31 | 0.00 | 8886.00 | 33.05 | 533.40 | 1051.00 |
| Nonfodder zooplankton -Noctiluca scintillans [ind/m3] | 7956 | 3876 | 491 | 0 | 80314 | 0 | 4347 | 8370 |
| Copepoda [ind/m3] | 7956 | 4585.10 | 1753.52 | 11.79 | 126047.00 | 582.13 | 5111.60 | 8966.00 |
| Cladocera [ind/m3] | 7956 | 2592.90 | 540.32 | 0.00 | 76532.00 | 108.08 | 1964.90 | 6128.00 |
| Meroplankton [ind/m3] | 7956 | 3690.80 | 762.81 | 0.00 | 43881.00 | 227.94 | 3013.00 | 7156.00 |
| Other groups [ind/m3] | 7956 | 439.70 | 45.19 | 0.00 | 14000.00 | 9.82 | 368.40 | 1174.00 |
| Fodder zooplankton [ind/m3] | 7956 | 11175.10 | 4277.71 | 68.77 | 151536.00 | 1579.07 | 11552.00 | 18494.00 |
| Total zooplankton [ind/m3] | 7956 | 15067.70 | 7482.94 | 68.77 | 194808.00 | 3762.98 | 17160.80 | 21790.00 |
| Nonfodder zooplankton -Noctiluca scintillans [mg/m3] | 7956 | 316.60 | 42.89 | 0.00 | 7068.00 | 0.11 | 340.80 | 722.00 |
| Copepoda [mg/m3] | 7956 | 74.80 | 34.16 | 0.12 | 2285.00 | 11.10 | 85.70 | 140.00 |
| Cladocera[mg/m3] | 7956 | 64.10 | 6.63 | 0.00 | 2307.00 | 1.14 | 47.50 | 173.00 |
| Meroplankton [mg/m3] | 7956 | 63.90 | 11.75 | 0.00 | 1743.00 | 1.90 | 45.20 | 152.00 |
| Other groups [mg/m3] | 7956 | 62.40 | 4.37 | 0.00 | 1592.00 | 0.78 | 41.80 | 175.00 |
| Fodder zooplankton [mg/m3] | 7956 | 260.80 | 94.12 | 0.89 | 3180.00 | 33.49 | 281.10 | 462.00 |
| Total zooplankton [mg/m3] | 7956 | 574.80 | 268.31 | 0.89 | 10103.00 | 117.83 | 651.70 | 925.00 |