**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

Luminița Lazar1,\*, Laura Boicenco2, Elena Pantea3, Florin Timofte2, Oana Vlas3 and Elena Bișinicu 3,\*

1Chemical Oceanography and Marine Pollution Department, National Institute for Marine Research and Development “Grigore Antipa”, 300 Mamaia Blvd., 900581 Constanta, Romania

2National Institute for Marine Research and Development “Grigore Antipa”, 300 Mamaia Blvd.,

900581 Constanta, Romania

3Ecology and Marine Biology Department, National Institute for Marine Research and Development “Grigore Antipa”, 300 Mamaia Blvd., 900581 Constanta, Romania

**\***Correspondence: [llazar@alpha.rmri.ro](mailto:llazar@alpha.rmri.ro) (LL); [ebisinicu@alpha.rmri.ro](mailto:ebisinicu@alpha.rmri.ro) (EB)

**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 |