A database of benthos and plankton in Romanian Black Sea waters

Boicenco Laura¹, Abaza Valeria¹, Bailly Nicolas², Bisinicu Elena¹, Culcea Oana¹, Dumitrache Camelia¹, Harcota George¹, Filimon Adrian¹, Oset Garcia Paula³, Pantea Elena¹, Tabarcea Cristina¹ and Timofte Florin¹

- ¹ National Institute for Marine Research and Development "Grigore Antipa" (NIMRD), 300 Mamaia Bdv., Constanta 900581, Romania
 - E-mail: lboicenco@alpha.rmri.ro
- ² Hellenic Centre for Marine Research (HCMR), Athinon-Souniou Av. P.O. Box 712, Greece
- ³ Flanders Marine Institute (VLIZ), Wandelaarkaai 7, 8400 Oostende, Belgium

Since 1956 several large benthos and plankton datasets had been collected in Romanian Black Sea waters, but they remained mostly unavailable to the wider research community. The aim of gathering and electronically archiving these historical data sets on marine biodiversity was to save and quality check them and render accessible for future spatial and temporal analyses in Black Sea countries and Europe. We have searched paper archives and scanned the primary protocols and grey literature on marine phytoplankton, zooplankton and macrozoobenthos species from Romanian Black Sea waters for the period 1956 -1999. The datasets were collected covering soft bottoms and the pelagic habitats.

The phytoplankton datasets contain 509 stations located in shallow to shelf waters and over 2129 samples collected from March to November, between 1956 and 1980, with no similar frequency of sampling each year, representing 28054 records of abundance data (cells \cdot L-1) and biomass (mg \cdot m-3) for individual phytoplankton taxa.

The zooplankton datasets for the period 1956 – 1980 contain 1227 samples collected at 675 stations from different layers, using the Baskakova net. They represent 39518 records of quantitative (density as $ind \cdot L-1$ and biomass as $ind \cdot L-1$ and biomass as $ind \cdot L-1$ and property data (zooplankton species diversity).

The macrozoobenthos datasets for the period 1977 – 1999 include 679 samples collected at different transects of the Romanian Black Sea littoral, between Sulina and Mangalia, from 5m to 55m depths. Van Veen grab with a sampling area of 1/20~m2 was employed as a macrozoobenthos sampler. The datasets contain 5102 records of abundance data (ind·m-2) and biomass (g·m-2) of macroinvertebrates identified at species level where possible.

All datasets have been formatted and converted to Darwin Core and submitted to EMODnet Biology. Units and taxonomy have been standardized and checked in WORMS to update the scientific names, with erroneous data being removed and all metadata included. Each delivered dataset was subjected to standard quality control procedures, especially on the level of taxonomy.

Keywords: historical datasets; phytoplankton; zooplankton; macrozoobenthos; Black Sea