

## **An analysis of biological data of the Georgian Black Sea coastal zone**

**Irine Baramidze**, Environmental Pollution monitoring Branch of natural environmental agency,  
(Georgia), [irine.baramidze@gmail.com](mailto:irine.baramidze@gmail.com)

**Tsisana Gvarishvili**, Fisheries and Black Sea monitoring division of natural environmental agency,  
(Georgia), [ciuri-gvarishvili@rambler.ru](mailto:ciuri-gvarishvili@rambler.ru)

**Eteri Mikashavidze**, Fisheries and Black Sea monitoring division of natural environmental agency,  
(Georgia), [eteri-mikashavidze@rambler.ru](mailto:eteri-mikashavidze@rambler.ru)

**Guranda Makharadze**, Batumi State University (Georgia) [guranda.makharadze@yahoo.com](mailto:guranda.makharadze@yahoo.com)

**Kakhaber Bilashvili**, Tbilisi State University (Georgia), [wocen@telenet.ge](mailto:wocen@telenet.ge)

**Madona Varshanidze**, WEFRI (Georgia), [varshanidzem@yahoo.com](mailto:varshanidzem@yahoo.com)

Basing on the biological information derived from SeaDataNet oceanographic data bases, for assessment of the current condition of biota of the Georgian Black Sea coastal waters, number of research activities has been carried out, as follow: identification of hydrochemical parameters, collection of phytoplankton, zooplankton, epifauna and benthic organisms, conservation, species identification, number and biomass determination, identification of dominant groups and species being essential for the state of ecosystems. In parallel with hydro-biological studies the hydrological and hydro-chemical indicators of sea water were determined. Hydrological parameters included pH, conductivity and salinity.

Studying of taxonomic composition, quantity, biomass and productivity of macroalgae gives a chance to make a conclusion on each waterpond condition. Phytoplankton plays a key role in the water quality formation. Zooplankton being as one of the most important thing in the feeding chain the studying of it assists to get an assessment of the water ecological condition. Epifauna is not considered only as a food for hydrobiota but it intensively activates in biofiltration process of the coastal zone. Despite of its Mediterranean origin the benthofauna of the Black Sea is 4-5 times insufficient.

With the result which we received by the study of phytoplankton we can conclude: There were 91 species and subspecies observed in samples of four season during whole years. 37 species of them were Diatoms, 30–Dinophyta, 11–Chromophyta, 6–Chlorophyta and 7–Cyanophyta. Dominant species mostly are fixe from Diatom group: *Skeletonema costatum*, *Leptocylindrus minimus*, *Chaetoceros lorenzianus*, *Ch. affinis*, *Thalassionema nitzschioides*.

Based on Epifauna data we can conclude that main groups composed of epifauna are Mollusca, Artropoda, Annelides, Platyhelminthes, Sarcodina, Tentaculata. The most abundant species were Mollusca (Bivalvias), Artropoda (Cructaceans) and Annelides (Popychaeta). Samples were collected in three stations: Tsikhisdziri, Green Cape and Kvariati (all stations along the coastal zone of the Black Sea, Georgia). In Kvariati samples were more diverse then others collected in Tsikhisdziri and Green Cape.

There were identified 46 species of zoobentos, in the bottom samples. Dominant speciese of this bottom settlement are: *N. Cirrosa*, from mollsca *Ch. gallina* and *C. Cornea*, arthropods *C. pestai* and *B. improvisus*.