

The Minor Rivers of Black Sea North-Western Coast

Alevtina Alyukaeva

P.P.Shirshov Institute of Oceanology of the Russian Academy of Sciences (IO RAS), Russian Federation
(fridrihovna@ocean.ru)

The generalisations and conclusions have been done based on the expeditional monitoring of minor rivers of the Russian Federation Black Sea Coast for summer-autumn mean water in 2011-2015. The length of coastal line under monitoring was 300 km with 78 rivers with length no longer, then 50 km.

The monitoring task was to establish the natural background of river effluent for the region under study.

The observation parameters are physical measures (temperature, , h), solution (salts) and suspension forms of effluent (feculence, suspension chemical composition).

1. The tendency to decrease minor river water temperature at isthmus correspondent to movement from north-west to south-east along the coastal line. The causes are the growing length of the rivers and steepness of the relief along the Black Sea Caucasus.
2. The dependence between the size of coagulated suspension and water temperature is established. Moreover the intensive mix is not able to compensate the negative influence of the low temperature.
3. The value of hydrogen index, mineralization and specific electric conductivity for minor river are growing from north-west to south-east along the coastal line.
4. By the main ionic composition of the minor rivers of Black Sea north-eastern coast can be classified as hydrocarbonate. The main characteristic (marker) of colt composition for the region is the sensible concentrations of potassium and sodium.
5. The amount of suspension substance in the river water and its feculence changes between 50 mg/dm³ 280 mg/dm³. In particle size distribution composition of river suspensions the politic fractions (up to 70%) are prevailed, sand and silt fractions are presented less (25%).
6. Suspension form content of microelements depends on general amount of suspension in river water. The suspension form migration is significant for lead, cobalt, tin and silver. Other metals “prefer” the solution forms and can be arranged approximately in the following: vanadium, manganese, nickel, zinc, copper. The maximal quantities of microelements are transferred by the waters of the southern rivers.