

Uticaj otpadnih voda na diverzitet makrozoobentosa Kolubare kod Vreoca

Reka Kolubara je svojim tokom akceptor otpadnih voda nekoliko zagađivača, među kojima se nalazi i selo Vreoci sa svojim industrijskim kompleksom za obradu uglja. Jula 2004. godine sprovedeno je istraživanje uticaja otpadnih voda na diverzitet makrozoobentosa Kolubare. Uzorci vode uzimani su sa obe strane reke 200 m pre uliva otpadnih voda, na ulivu i 200 m posle uliva, a uzorci mulja sa toka otpadnih voda. Izvršena je analiza uzoraka mulja desne obale na arsen i živu i hemijska analiza uzoraka voda na istim mestima. Za uzorke na svim lokalitetima sprovedena je kvalitativna i kvantitativna analiza faune dna, na osnovu čega je određen Sorensenov koeficijent sličnosti među uzorcima.

Konstatovano je samo pet grupa makroinvertebrata (larve Diptera, Megaloptera, Odonata, Oligochaeta i Gastropoda) i jedna nedeterminisana vrsta. Sve grupe izuzev Oligochaeta, kod kojih su determinisane 404 vrste, su malo zastupljene.

Otpadne vode utiču na bitno pogoršanje kvaliteta vode Kolubare, na šta ukazuju rezultati hemijske analize, dok na distribuciju makroinvertebrata naizgled nemaju velikog uticaja. Trebalo bi nastaviti istraživanja i tokom drugih sezona radi dobijanja kompletne slike o uticaju otpadnih voda na diverzitet makrozoobentosa na ovom delu toka Kolubare.

Influence of Waste Water on the Diversity of Macroinvertebrata of Kolubara River Near Vreoci

The Kolubara river begins near Valjevo and joins the Sava near Obrenovac. During its flow, the Kolubara accepts products of many pollutants and one of the greatest is the waste industrial water of the complex for processing coal in the Vreoci village. It is supposed that this waste water has an important influence on the life of the whole river, and not only benthic organisms. This research was carried out in order to determine the influence of this waste water on the diversity of macroinvertebrates of the Kolubara river near Vreoci.

The results show that there are only 5 macroinvertebrate groups found in the researched samples of benthic fauna (larvae Diptera, Megaloptera, Odonata, Oligochaeta and Gastropoda) and one undetermined specimen. Their population is small, except that of Oligochaeta, which in the sample taken from the flow of waste waters reached the number of 404 specimens.

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The results of chemical analyses show that there is an important influence on the quality of the water of the Kolubara at this part of its flow, and that it is an organic pollution. Combined with the climatic conditions in the period of investigating, this pollution causes low abundance of macroinvertebrates. All the specimens found are specialized in living in the conditions of high concentrations of pollutants and lack of oxygen in the water.

The research did not show great influence of the pollution because in the period of investigating the warm climate, low concentration of oxygen in water and low water level of the Kolubara caused similar conditions in every example taken.