

ASSESSMENT OF HEAVY METALS POLLUTION OF BAKSAN RIVER (CENTRAL CAUCASUS) AND ITS TRIBUTARIES

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The Baksan river is one of the main water arteries of the Central Caucasus, where due to geological and geochemical features, the water bodies contain high concentrations of many heavy metals (HM), which are considered the most dangerous pollutants. The aim of the study was to assess the degree of pollution of the Baksan river and its main tributaries by a number of metals. The calculations took into account the content of 10 elements (Al, Pb, Cd, Cr, Ni, Zn, Cu, Mo, Ag, Mn) in 18 observation points. Characteristic pollutants for each point and their typical concentration levels were identified, the specific combinatorial water pollution index (SCWPI) was calculated, the critical pollution indicators (CPI) were determined and the water quality class in each range was assigned. According to the results of the study, the most and least polluted water bodies, as well as pollutants characteristic for each of them and their typical levels were identified. It was revealed that in the objects that do not experience anthropogenic load, the class of water quality is not much different from the objects subject to significant anthropogenic impact, and in some cases were more contaminated.

Keywords: Baksan river, pollution, heavy metals, typical pollutants, SCWPI, class of water quality.

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