TRACE METALS IN WATER AND SEDIMENTS
OF THE PRUT RIVER, ROMANIA

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Abstract

A 120 kilometers reach of the Prut River, Romania was surveyed and the concentrations of four trace metals (copper, cadmium, lead and zinc) were determined in water and sediments. These elements are the main pollutants expected in the region, as a steel-producing factory in Romania is located in the close neighborhood of an area under protection, the Lower Prut Floodplain Natural Park. Samples were collected in 2010 and 2011 from the water-sediment interface at six locations along the lower sector of the Prut River. Sediments were sampled only once whereas water samples were collected during four campaigns organized at the end of the summer and beginning of the autumn in order to include both high and low flow regimes of the river. Toxic metals (Pb and Cd) were not found to reach notable levels. The resulted concentrations for all trace metals were lower than the values determined in other Romanian rivers (e.g. Danube) and within the values range imposed by the Romanian regulations for water and sediments quality.

Key words: trace metals, Prut River, Romania, sediments, water

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