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Assessment of heavy metal pollution in sediments and in Phragmites Australis from Argeş River

Abstract

There are several species of macrophyte which have the ability to absorb heavy metals from water and, therefore, are used to retain and remove them. In the present paper, the concentrations of heavy metals (Zn, Cu, Ni, Cd, Pb and Cr) were investigated in sediment samples from the Argeș River and their potential transfer from sediments to Phragmites australis was evaluated. The extent of sediment pollution with heavy metals and the potential risk to the aquatic environment were estimated based on the following indexes: bioaccumulation, geoaccumulation, ecological risk, translocation, contamination, etc. The metals concentrations in the analyzed sediments were, generally, below the limits of national legislation.

Keywords

Argeș River; Heavy metals; Phragmites australis; Sediments