

Barbusinski, K., Nocon, W., Nocon, K., Kernert, J. The Role of Suspended Solids in the Transport of Heavy Metals in Surface Water, Exemplified by the Klodnica River (Upper Silesia). *Ochrona Srodowiska* 2012, Vol. 34, No. 2, pp. 33–38.

Abstract: Concentrations were measured of eight heavy metals (Zn, Pb, Cd, Cr, Cu, Ni, Mn, Fe) found in the suspended solids of surface water. The Klodnica River was chosen as an example to demonstrate the role of suspended solids in heavy metal transport. Water samples containing suspended solids were collected at eight points located along the entire length of the river. The results were interpreted using the German classification LAWA. A correlation was found to occur between the heavy metal ion content and the iron content of the suspended solids. Comparative analysis has demonstrated that the heavy metal content of suspended solids was lower in the Klodnica than in the Odra River and its tributaries. Analysis of the results has also revealed that the heavy metal ion content of suspended solids was several times that of the bottom sediments. This substantiates the significant role of suspended solids in the transport of pollutants down the river. Considerable changes in the heavy metal ion content of suspended solids (not only observed during this study but also reported in the literature) corroborate the need of investigating the dynamics of these changes.

Keywords: River water, suspended solids, bottom sediments, heavy metals, pollution transport.