

Nocon, W., Barbusinski, K., Nocon, K., Kernert, J. Changes in Trace Metal Load in Suspended Solids Carried Along the River. *Ochrona Srodowiska* 2013, Vol. 35, No. 1, pp. 33–38.

Abstract: The paper discusses potential use of changes in load of suspended solids and co-transported trace metal ions to define sectors of the river where increased sedimentation occurs as river bottom deposits. Therefore, flow rate of the river was being determined as well as content of total suspended solids and of selected metal ions (Zn, Cd, Cu, Mn, Pb, Cr, Ni, Fe) in suspended solids and bottom sediments. Changes in the load of suspended solids and of metals with suspended solids found along the course of the river (Klodnica, Upper Silesia) were estimated. It was established that under similar hydraulic conditions the load of metals associated with suspended solids was a function of change in the load of suspended matter. The results of the research allowed determination of sectors of the Klodnica River where sedimentation of the major part of suspended solids is observed and where the number of metal ions in the bottom sediments is increased. This will enable defining sectors of small and medium-sized rivers that require certain measures to be taken in order to improve their ecological state.

Keywords: Suspended solids, trace metals, load balance, bottom sediments, Klodnica River.