

# APPRAISAL OF BOTTOM SEDIMENT POLLUTION WITH HEAVY METALS OF SMALL WATER RESERVOIRS LOCATED IN SOUTH POLAND

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**Abstract:** In result of a few years' investigations of silting of small water reservoirs located in South Poland, intensity of the silting process as well as the granulometric and chemical composition of bottom sediments were evaluated. The content of heavy metals i.e. copper, lead and cadmium was determined in samples collected in various parts of five small water reservoirs. The content of heavy metals was appraised according to the regulation of the Minister of Environment, according to the criteria of Polish Geological Institute, of Inspection for Environmental Protection, of Institute of Soil Science and Plant Cultivation, and according to the Müller's method. The obtained results of determination of the examined heavy metals concentrations were compared with the values of reservoir and river sediment concentrations determined by other authors in Europe. Appraisal of silt quality, respectively to the adopted criteria, showed only an insignificant degree of pollution. Concentrations of microelements do not exceed the toxic concentrations for soils and environment but may have a harmful influence on living organisms. Recording of changes of heavy metal pollution during many years' operation of small water reservoirs, considering changes occurring in the basins, requires continuation of investigations. It will enable to record changes of pollution during a longer period of operation of reservoirs, also against the background of changes occurring in river basins.