THE QUALITY OF SEDIMENT IN SHALLOW WATER BODIES — LONG-TERM SCREENING OF SEDIMENT IN THE CZECH REPUBLIC

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This article presents the long-term screening results from the 2011–2019 period. Database of results contains approximately 230 localities. More than 80% of the samples were taken from fishponds. The Czech Republic fishpond sediment volume estimates amounts to 200 mil. m^3. Sediment quality is being impacted by numerous factors. If legislation limits are abided by, sediments may be used. All results have been compared with the Decree No. 257/2009 regulating the conditions for the application of sediment on agricultural land.

We have focused on evaluating toxic metals (As, Pb, Zn, Cu, Hg, Cd) and organic pollutants (C10–C40, BTEX, PAH, PCB, DDT). The results reveal that the average concentration of the metals leads to the following ranking: Zn > Cu > Pb > As > Cd > Hg. The most frequent excess of the limit listed in Decree No. 257/2009 was reported for cadmium (29 locations, i.e. 12.8%). In the case of organic pollutants, the worst pollutant exceeded the limits for 7.6% (PAU) of sites, BTEX cca 4.1%, DDT 1.4% and PCB cca 1.3%.