

CHANGES OF CHOSEN CHEMICAL ELEMENTS CONCENTRATION IN ALLUVIAL
SEDIMENTS: AN EXAMPLE OF THE LOWER COURSE OF THE OBRA RIVER
(WESTERN POLAND)

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Abstract: Research concerning chemical constitution of alluvial sediments was done in the lower course of the Obra River (Western Poland). The fragment of vertical profile, which consisted of various alluvial sediments (fine sands, peats and sandy silts) was chosen for detailed analysis. Main research problem was to determine if lithology and chemical constitution of alluvial deposits are interconnected in a distinct way within studied section of the Obra river valley, and if changes of chemical elements concentration could be used to illustrate depositional processes which take place in river bed and floodplain. Concentrations of Fe, Mn, Cu, Zn, Ca, Mg and K were determined in collected sediment samples. Investigated changes of chemical elements concentration show that there is a distinct border between the organic sediments, which mark the place of former functioning of the Obra river bed, and sandy silts, which were deposited within floodplain during floods. Besides, dependence between lithologic variability of alluvial sediments and their chemical constitution was observed. However, this dependence is not clear in some cases. The authors concluded that it is necessary to use statistic analyses to define connection between lithology and chemical constitution of alluvial deposits (distinguishing geochemical groups of alluvial sediments).