

Abstract:

This thesis aims to evaluate the anomalous concentrations of arsenic in soils (>30 mg/kg) of the Czech Republic. Anomalous concentrations are mainly caused by combustion of fossil fuels, mining operations and weathering of arsenic-rich rocks. The largest part of contaminated soil in CR is related to the combustion of arsenic-rich lignite, and includes, e.g., the area of Ore Mountains. The highest concentrations of arsenic in soil of CR are up to thousands of mg/kg. For example, soil adjacent to the Kutná Hora ore district contained up to 6 890 mg/kg of As. Such a high concentrations are due to mining operations. Beside anthropogenic sources, weathering of arsenic-rich rocks at Mokrsko has resulted in anomalous concentrations in soil that may attain up to 2 890 mg/kg.