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were revisited in November 2013 for a biomonitoring phase. Environmental monitoring entailed a second drinking water sample, a garden/vegetable patch soil sample, indoor dust wipe/vacuum bag sample and a rice sample. Biomonitoring consisted of a first morning void (FMV) urine, hair and toenail sample from 214 residents who also completed an exposure assessment questionnaire. Total arsenic concentration was determined by ICP-MS and arsenic speciation was performed by HPLC coupled to ICP-MS.

Data will be presented, on the distribution of exposure of the local population to arsenic present in PWS , the pattern of body burden assessed by urinary concentrations and the correlation between drinking-water arsenic versus urinary arsenic. Further ongoing work will relate arsenic exposure and uptake to other exposure routes and the underlying geology.

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ABANDONED MINING SITES AND THEIR INFLUENCES ON HUMAN HEALTH, SLOVAK REPUBLIC

This work deals with the analysis of the influence of potentially toxic elements (PTE) in geological environment (soils, groundwater) on the health status of the inhabitants living in three abandoned mining sites: Middle Slovak Neovolcanics (ore extraction), the Slovak Ore Mts. (ore extraction) and the Upper Nitra region (brown coal exploitation). The health status of resident population in these areas with increased concentrations of PTE (As, Pb, Zn, Cu, Cd, Hg and Sb) was compared with the adjacent municipalities showing low PTE contents in soil. A total of 138 contaminated and 155 non-contaminated municipalities of similar socioeconomic, natural and geochemical-geological character were compared. PTE contents in soils of polluted municipalities reported considerably increased levels – between 2 to 10 times higher in contrast to non-contaminated municipalities. On the other hand, PTE contents in groundwater were almost identical both in contaminated as well as non-contaminated areas and in majority of cases were below limit standard values for drinking water. Based on the assessment of the health status of population using 43 health indicators, no significant difference in the health status of population in contaminated and non-contaminated municipalities has been reported. We can conclude that if groundwater/drinking waters used for drinking purposes show no PTE contamination, the local population inhabiting these historical mining areas might be at much lower risk than has been, in general, reported so far.

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THE POTENTIAL FOR ORGANIC CONTAMINANTS TO MIGRATE TO OFF-SITE HUMAN RECEPTORS DURING REMEDIATION

The remediation of land affected by contamination can occur as a result of sites being determined as "Contaminated Land" by Local Authorities, voluntary remediation or through the redevelopment of sites for new uses, usually controlled through the planning regime.

Methods of remediation are varied, and may involve treatment or removal of contaminated soils from site. During remediation there is the potential for contaminants to migrate off-site, as vapours or in dust, and pose a toxicological risk to adjacent existing site users e.g. residents.

The first case study is a former dry cleaners where the site investigation indicated that there were a number of volatile organic compounds present at the site including trichloroethylene, benzene and vinyl chloride. The Health Protection Agency reviewed the remediation strategy.

The second case study focuses on a former industrial landfill, which was being remediated by excavation and removal of the waste. Due to adjacent residential properties air quality monitoring was undertaken and the results reviewed by the Health Protection Agency. Particular contaminants discussed include aniline and chromium.

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LEAD-ZINC TAILINGS DAM: RELEVANCE TO HUMAN HEALTH (EASTERN FYR MACEDONIA)

Since evolution, civilizations have exploited metals for tools, weapons and building materials. Since the "Copper (Chalcolithic) Age" and later "Golden Age", mining activities have created great wealth. Unfortunately, beside wealth the exploitation of metal rich ores, have been always correlated with a negative impact to the nearby ecosystems. Thus, the Sasa tailings dam (Eastern FYR Macedonia) material was characterized, to evaluate the contents of some potentially toxic elements (PTE). Furthermore, PTE were determined also in the surrounding fresh waters (lake, river) and the home-grown vegetables, to evaluate the potential hazardous effects of the PTE on humans. PTE were determined ICP-emission spectrometry following