vegetation, and using the atomic absorption spectrometry technique, various concentrations of certain metallic trace elements having diverse anthropic origins in the soil, and showing accumulation in important local fruit crops such as the industrial tomato. These elements include lead (Pb), with relatively high concentrations (45ppm in the soil and 8ppm in the fruit), presenting a potential risk to soil fertility and human health. The presence of these metallic trace elements in both water and agricultural soil could be dangerous not only for Seybouse wadi, which is a source of water for many purposes (agricultural, industrial and domestic) but also for the population consuming agricultural products of this area. As such we recommend regular monitoring of the soil and water quality to facilitate catchment management.

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THE POTENTIAL IMPACT OF GEOLOGICAL ENVIROMENT ON HEALTH STATUS OF RESIDENTS OF THE SLOVAK REPUBLIC

This work deals with the analysis of potential impact of the geological environment (groundwater and soil) on the health status of the population of the Slovak Republic. In order to assess health status of residents living in various geological environments, the whole territory of the Slovak Republic was divided into eight major geological units: Paleozoic, Crystalline, Carbonatic Mesozoic and basal Paleogene, Carbonatic-silicate Mesozoic and Paleogene, Paleogene Flysch, Neovolcanics, Neogene and Quaternary sediments. Based on these geological units, the databases of environmental indicators (chemical elements/parameters in groundwater and soils) and health indicators (mortality for various diseases according to International Classification of Diseases) were compiled. The geological environment of the Neogene volcanics (andesites and basalts) has been clearly documented as having the least favourable impact on the health of Slovak population, while Paleogene Flysch geological environment (sandstones, shales, claystones) has the most favourable impact. The most significant differences between these two geological environments were observed, especially for the following health indicators: mortality rate for cerebral infarction and strokes (more than 70 %), for digestive system (55 %), for circulatory system and for endocrine and metabolic system (almost 40 %) and for malignant neoplasms (more than 30 %). These results can likely be associated with deficit contents of Ca and Mg in groundwater from the Neogene volcanics that are only about half the level of Ca and Mg in groundwater of the Paleogene sediments.

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IMPACT OF AGRICULTURAL ACTIVITY OF PORT WINE PRODUCTION IN THE SOIL QUALITY AND ADJACENT AQUATIC SYSTEMS

The use of agrochemicals in vineyards may result in adverse effects of ecosystems functions and in potential risks to environmental and