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2.2.1 A conceptual model of As in the aquifer 2.3 Predicting As in tube well discharge; 2.3.1 Modelling As at shallow HTWs; 2.3.2 Modelling As at DTWs; 2.4 Evidence for changing As concentration at tube wells; 2.4.1 Arsenic concentration and tube well age in Bangladesh; 2.4.2 Arsenic concentration and tube well age at village scale; 2.4.3 Time-series monitoring of As concentration; 2.4.4 Isotopic indication of vertical leakage; 2.5 Discussion; 2.6 Future directions; Acknowledgements; References; Chapter 3. Source identification for groundwater arsenic in the Verde Valley, Central Arizona, USA Abstract 3.1 Introduction; 3.2 Geology of Verde Valley; 3.2.1 Verde Formation; 3.2.2 Precambrian rocks; 3.2.3 Montezuma Well; 3.2.4 Verde Hot Springs; 3.2.5 Chemical composition of Verde Valley groundwater; 3.2.6 Local channelization of groundwater; 3.3 Experimental; 3.3.1 Cation and anion analyses; 3.3.1.1 ICP-MS analysis; 3.4 Results and discussion; 3.5 Future directions; Acknowledgments; References; Chapter 4. Natural arsenic in groundwater and alkaline lakes at the upper Paraguay basin, Pantanal, Brazil; Abstract; 4.1 Introduction; 4.2 Regional setting; 4.3 Materials and methods 4.3.1 Fieldwork

Sommario/riassunto

This volume presents the recent developments in the field of arsenic in soil and groundwater. Arranged into nine sections, the text emphasizes the global occurrences of arsenic in the environment, particularly on its source, pathways, behavior, and effects it has on soils, plants, water, animals, and humans. It also covers the diverse issues of arsenic in the mining environment, arsenic emanating from hydrothermal springs, and the geochemical modeling of arsenic adsorption to oxide surfaces. Finally, the text includes different cost effective removal mechanisms of arsenic from drinking water
