

1. Record Nr.	UNINA9910845092103321
Autore	Ali Shakir
Titolo	Groundwater Quality and Geochemistry in Arid and Semi-Arid Regions / / edited by Shakir Ali, Abdelazim Negm
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2024
ISBN	3-031-53777-7
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (372 pages)
Collana	The Handbook of Environmental Chemistry, , 1616-864X ; ; 126
Altri autori (Persone)	NegmAbdelazim
Disciplina	577.14
Soggetti	Environmental chemistry Water Hydrology Environmental monitoring Pollution Geochemistry Biogeography Environmental Chemistry Environmental Monitoring Biogeosciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part 1: Assessment of groundwater quality -- Chapter 1: Unveiling the Hidden Depths: A Review for Understanding and Managing Groundwater Contamination in Arid Regions -- Chapter 2: Risk Assessment of Potential Groundwater Contamination by the Agricultural Drainage Water in the Central Valley Watershed, California, USA -- Chapter 3: Impact of Bugun Reservoir on Groundwater and Soil: A Case Study from South Kazakhstan -- Chapter 4: Impact of Climate Changes on Seawater Intrusion in the Nile Delta Aquifer (Egypt) -- Chapter 5: Groundwater Quality Prediction in Upper and Middle Cheliff Plain, Algeria Using Artificial Intelligence -- Chapter 6: Evolution of Groundwater in the Cheliff and Mitidja Aquifers (North Algeria) in Qualitative and Quantitative Terms -- Chapter 7: Groundwater Pollution Sources and Its Quality in Kingdom of Saudi Arabia- State-of-the-Art

-- Chapter 8: Isotopic and Chemical Composition of Egypt's Groundwater Resources -- Chapter 9: Understanding Seawater Intrusion by Hydrochemical Parameters and Stable Water Isotopes along the Coastal Alluvial Aquifers of the Essaouira Basin, Morocco -- Part 2: Major global contaminants in groundwater -- Chapter 10: Geochemical Controls on Fluoride Enrichment in Groundwater of a Geologically Heterogeneous Part of Ghana: Implications for Human Health Risk Assessment -- Chapter 11: Uncovering Fluoride Contamination in Groundwater of Arid and Semi-Arid Regions: Stigma to Solutions -- Chapter 12: Nitrate Contamination in Groundwater of Arid and Semi-Arid Regions: Ecotoxicological Impacts and Management Strategies. .

Sommario/riassunto

This book reviews groundwater quality and its major global contaminants, and collects the latest advances in the analysis, remediation, risk assessment, and hydrogeochemistry of groundwater in countries such as Algeria, Egypt, Ghana, Kazakhstan, Morocco, Saudi Arabia, and the USA. This book mainly focuses on the major arid and semi-arid areas where groundwater is scarce and highly polluted with geogenic and anthropogenic contaminants and the recharge to the groundwater is negligible due to limited rainfall. Divided into 2 parts, the book starts by covering topics like assessment and protection of groundwater in arid and semi-arid regions, groundwater pollution, and contamination risk assessment. Particular attention is given to the application of environmental isotopes in groundwater studies and how anthropogenic activities impact groundwater quality, the impact of irrigation reservoirs in groundwater and soil quality, and how artificial intelligence is applied to forecast groundwater quality. In the second part of this book, readers will find more about the major global contaminants of groundwater in arid and semi-arid areas, including a geochemical analysis of fluoride and nitrate contamination. Supported by regional case studies, this book appeals to researchers, scholars, and professionals working in the field of groundwater contamination and remediation and is also an important account for policymakers. .
