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| Nota di contenuto | Chapter 1. An Overview of Water Resource Challenges and Managed Aquifer Recharge (MAR) in the MENA Region (Mustafa El-Rawy) -- Chapter 2. Advancing Groundwater Management and Seawater Intrusion Monitoring in the Middle East and North Africa: Exploring the Potential of Nuclear Tracer Techniques (Mohamed A. S. Abdel Monem) -- Chapter 3. Rainwater Harvesting for Managed Aquifer Recharge and Flood Mitigation in the MENA Region (Mustafa El-Rawy) -- Chapter 4. Soil Aquifer Treatment (SAT) for Managed Aquifer Recharge and Water Quality Improvement in the MENA Region (Hani Alharbi) -- Chapter 5. Applicability of River Bank Filtration for Affordable Drinking Water in the MENA Region: Hydrogeological Insights and Water Quality Implications (Ahmed Abdelrady) -- Chapter 6. The Status of the Applications of the Managed Aquifer Recharge in the Sultanate of Oman (Osama Ragab) -- Chapter 7. Assessment of Riverbank Filtration (RBF) for Drinking Water Supply in Upper Egypt (Mohamed Galal Eltarabily) -- Chapter 8. A Tale of Two Countries: The Potential of Managed Aquifer Recharge in Pakistan and Egypt (Amar Razzaq) -- Chapter 9. Potential Environmental Risks of Aquifer Recharge Using Treated Wastewater in |

MENA Countries (Heba Fathi) -- Chapter 10. Impact of Aquifer Recharge on Groundwater Quality (Ahmed Khaled Abdella Ahmed) -- Chapter 11. Conclusions and Recommendations for “Managed Aquifer Recharge in the MENA Countries” (Mustafa El-Rawy).

Sommario/riassunto

This book presents an updated state-of-the-art for managed aquifer recharge (MAR) for MENA regions. MENA regions are home to 6% of the world's population but only possess 1.4% of its water resources with almost absolute scarcity. Groundwater is the primary source of water in 54% of MENA countries. Therefore, the MENA regions seek sustainable management solutions amid its arid climate and rising demands from urbanization and agriculture. MAR aims to help sustain groundwater resources. This book explores MAR as a strategic approach to reducing water security by enhancing groundwater supplies. Utilizing techniques such as soil aquifer recharge, aquifer storage and recovery, rainfall harvesting, and riverbank filtration. The presented case studies offer deep insights into MAR methods, their implementation, and MAR technologies. The beneficiaries of the book include postgraduate students, academics, policymakers, and practitioners in water resources.
