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regions and the control mechanisms: Insights for sustainable groundwater development and management -- Characteristics of groundwater level dynamics in Xi'an (2010-2020) and groundwater level prediction for 2030 using regression analysis and BP neural network -- Evaluating Uranium Toxicity in Groundwater and Associated Health Risks in a Hard Rock Aquifer, South India -- Groundwater Resources Availability in the Shangzhou Basin Area, China: A Modeling Research -- Utilization of Green Chemistry Nano-Emulsion in remediation of Real Contaminated Coastal Sediments by HOCs and Pb to Protect Shallow Aquifer -- Magnetic Induction on pH, Oxidation-reduction Potential, Conductivity and Dissolved Oxygen Level of Water and Its Properties: A State-of-the-art Review -- The deficit Libres-Oriental aquifer (Balsas region) of eastern-central Mexico under global warming: hydrochemistry, moisture recycling and rock-water interaction -- Radionuclides as environmental contaminants of concern: threats to public health through soil and groundwater -- Future Research Imperatives in Hydrogeology.

Sommario/riassunto

This book addresses this challenge head-on, focusing on the intersection of groundwater sustainability and environmental health. It explores the complex relationship between groundwater management and environmental integrity, delving into topics like the impacts of groundwater extraction on ecosystems, the role of groundwater in climate change adaptation and mitigation, and the effects of surface water-groundwater exchange on groundwater quality. The book also highlights the latest scientific research, technological advancements in the field of sustainable groundwater management. Moreover, this book not only identifies the challenges but also proposes viable solutions. It presents a range of practices, innovative solutions, and policy recommendations to manage groundwater resources effectively while minimizing environmental impact. These will be drawn from a variety of contexts and case studies, making the book a comprehensive guide for researchers, policy makers, practitioners, and students in the field. By providing a holistic perspective on sustainable groundwater management, this book contributes significantly to our collective efforts toward achieving water security and environmental sustainability.