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Nota di contenuto	Chapter 1. Introduction: Groundwater and Society: Applications of Geospatial Technology (Pravat Kumar Shit, Gouri Sankar Bhunia, Partha Pratim Adhikary, Ch. Jyotiprava Dash) Part I: Groundwater resources and societal development Chapter 2. Groundwater and Society in India: Challenging Issues and Adaptive Strategies (Subrata Jana) Chapter 3. Groundwater Research and Societal Development: Integration with Remote Sensing and Geographical Information System (Gouri Sankar Bhunia, Pravat Kumar Shit, Partha Pratim Adhikary and Debashish Sengupta) Chapter 4. Geospatial and Geophysical Approaches for Assessment of Groundwater Resources in an Alluvial Aquifer of India (Partha Pratim Adhikary, S.K.Dubey, Debashis Chakraborty, Ch. Jyotiprava Dash) Chapter 5. Groundwater and Space Technology: Issues and challenges (Gouri Sankar Bhunia, Pravat Kumar Shit, Harsha Das Gupta, Partha Pratim Adhikary) Part II: Groundwater availability, quality and pollution Chapter 6. Groundwater Quality through Multi-criteria based GIS Analysis: Village Level Assessment (Baisakhi Chakraborty, Sambhunath Roy, Gouri Sankar Bhunia, Debashish Sengupta, Pravat Kumar Shit) Chapter 7. GIS-based Fuzzy-AHP Approach for Assessment of Groundwater Potential Zones of an Urban Agglomeration (Suraj Kumar Mallick, Somnath Rudra) Chapter 8. Assessment of Groundwater Availability in Gumani River Basin, India using Geoinformatics and Analytical Hierarchy Process (Sadik Mahammad, Aznarul Islam) Chapter 9.

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Application of AHP for Groundwater Potential Zones Mapping in Plateau Fringe Terrain: Study from Western Province of West Bengal (Manas Karmakar, Monali Banerjee, Mrinal Mandal, Debasis Ghosh) -- Chapter 10. Performance of Frequency Ratio Approach for Mapping of Groundwater Prospect Areas in an Area of Mixed Topography (Subhas Garai, Pulakesh Das) -- Chapter 11. Artificial Neural Network for Identification of Groundwater Potential Zones in part of Hugli District, West Bengal, India (Chalantika Laha Salui and Shashank Yadav) --Chapter 12. Multi-criteria Analysis for Groundwater Quality Assessment: A Study in Paschim Barddhaman District of West Bengal, India (Pavel Das, Niladri Das) -- Chapter 13. Performance of WQI and HPI for Groundwater Quality Assessment: Study from Sangramgarh Colliery of West Burdwan District, West Bengal, India (Tanushree Paul, Manas Nath) -- Chapter 14. Assessment of Groundwater Quality interaction using One-decade Data: Case Study from a Hard Rock Area (S. Satheeshkumar, S. Venkateswaran, T. Maheshwari) -- Chapter 15. Fluoride Dynamics in Precambrian Hard Rock Terrain of North Singbhum Craton and Effect of Fluorosis on Human Health and Society (Biswajit Bera, Sumana Bhattacharjee, Meelan Chamling, Arijit Ghosh, Nairita Sengupta, Supriya Ghosh) -- Chapter 16. Coastal Aquifer Vulnerability for Saltwater Intrusion: A Case Study of Chennai Coast Using GALDIT Model and Geoinformatics (Debabrata Ghorai, Gouri Sankar Bhunia, Pravat Kumar Shit) -- Part III: Sustainable Groundwater resources management -- Chapter 17. Watershed Development Impact on Natural Resources: Groundwater and Surface Water Utilization (Partha Pratim Adhikary, M. Madhu, P. Jakhar, B.S. Naik, H.C. Hombegowda, D. Barman, G.B. Naik, Ch. J. Dash) -- Chapter 18. Longterm Groundwater Behaviour over an Agriculturally Developed State of North-West India: Trend and Impact on Agriculture (Omvir Singh, Amrita Kasana, Pankaj Bhardwaj) -- Chapter 19. Spatial Appraisals of Groundwater Recharge Potential Zone Identification using Remote Sensing and GIS (Gouri Sankar Bhunia, Pranab Kumar Maity, Pravat Kumar Shit) -- Chapter 20. Spatial Mapping of Groundwater Depth to Prioritize the Areas under Water Stress in Ravalaseema Region of Andhra Pradesh, India (Ch. Jyotiprava Dash, PP Adhikary, Uday Mandal) -- Chapter 21. Exploring Vulnerability of Groundwater using AHP and GIS Techniques: A Study in Cooch Behar District, West Bengal, India (Dipankar Saha, Debasish Talukdar, Ujjal Senapati, Tapan Kumar Das) -- Chapter 22. Applicability of Geospatial Technology, Weight of Evidence and Multilayer Perceptron for Groundwater Management: A Geoscientific Study on Birbhum District, West Bengal, India (Niladri Das, Subhasish Sutradhar, Ranajit Ghosh, Prolay Mondal) -- Chapter 23. Water resources management in semi-arid Purulia District of West Bengal, in the context of sustainable development goals (Amit Bera, Shubhamita Das). This volume advances the scientific understanding, development, and application of geospatial technologies related to groundwater resource management, mapping, monitoring, and modelling using up-to-date remote sensing and GIS techniques. The book further provides a critical analysis of the debates and discourses surrounding groundwater resources and society, illustrates the relationship between groundwater resources and precision agriculture for societal development, and describes novel, region-specific management strategies and techniques for sustainability with case studies. The book is organized into three parts: (I) Groundwater resources and societal development; (II) Groundwater availability, quality and pollution; and (III) Sustainable groundwater resources management. Each section begins with a short introduction that includes an overview of the papers in that section.

Sommario/riassunto

Individual chapters focus on the core themes of research and knowledge along with some topics that have received lesser attention. The book will be of interest to water resource planners and decisionmakers, academic researchers, policy makers, NGOs, and academic researchers and students in Geography, Geophysics, Hydrology, Remote Sensing & GIS, Agriculture, Soil Science, and Agronomy.