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Nota di contenuto	Chapter1. GIS-based Multi-Criteria Decision Analysis for Identifying Rainwater Harvesting Structures Sites in a Semi-Arid River Basin -- Chapter2. Hydrochemical Investigation and Water Quality Mapping in and around Pallikarnai Marsh Land Area in Chennai, India -- Chapter3. Catchment Scale Modeling of Land Use and Land Cover Dynamics -- Chapter4. Urban Floods: A Case Study of Patna Floods 2019, Natural or Anthropogenic?- Chapter5. Flood Susceptibility Zonation using Dempster-Shafer Evidential Belief Function (EBF) Method in Chalakudy Taluk, Kerala, India -- Chapter6. Impact of Urbanization on Ganga River Basin: An Overview in the Context of Natural Surface Water Resources -- Chapter7. Urban Water Scarcity: A Global Challenge and Impending Solutions -- Chapter8. Groundwater Scarcity in Urban Areas is a Major Issue - Case Studies from West Bengal -- Chapter9. Impact of Urbanization and River Morphology on Groundwater System in Patna Urban Area, Bihar, India -- Chapter10. Aquifer Storage and Recovery: Key Issues and Feasibility -- Chapter11. Temporal Prediction of Groundwater Levels: A Gap in Generalization -- Chapter12. Suitability of Groundwater for Drinking and Agricultural Use in Patna District, Bihar, India -- Chapter13. Groundwater Potential Assessment using GIS-based Weighted Linear Combination Technique: A Case Study of Hard Rock Terrain around Bhopal, India -- Chapter14. The Effect of

Urbanization on Groundwater Quality and Hydrochemical Characteristics in Ennore Coastal Aquifers of Chennai, South India --  
Chapter15. Groundwater Contamination in Parts of Northwestern Hyderabad- A Hydrogeochemical and Geospatial Approach --  
Chapter16. Spatio-Temporal Dynamics of Groundwater Recharge in Dras Sub-Basin of Upper Indus River Basin, Western Himalayas --  
Chapter17. Impact of Urbanization on Groundwater in Changing Climatic Scenario: A Case Study.

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Sommario/riassunto

This book documents the various impacts of urbanization on hydrological systems and water resources. The first half of the book is focused on urbanization and surface waters, starting with the status of hydrological systems in the urban areas, i.e. the catchment characteristics and changes in rainfall dynamics. The most pronounced hydrological problems in cities are changes in runoff due to precipitation. Recently, rain events have been less frequent but more intense, sometimes leading to flash floods. Though the substantial increase in runoff causes floods in the urbanized area, it may be attributed to the reduction of infiltration due to construction of roads. This, in turn, results in groundwater decline and depletion. The second half of the book covers the impact of urbanization on groundwater, which starts with hindered or significantly reduced recharge taking place due to altered urban surfaces. The limited groundwater resources are over-exploited by the urban population, leading to water scarcity and depletion. Groundwater gets polluted due to solid waste dumping sites or by wastewaters discharged by industries. The book will be useful for researchers, educators, municipal/city authorities, government officials, and NGOs.

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