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Nota di contenuto	Chapter 1. Occurrence and Health Impacts of Emerging Contaminants in Municipal Wastewater Reuse -- Chapter 2. Promises and Challenges of Growing Microalgae in Wastewater -- Chapter 3. Risk of Metal Contamination in Agriculture Crops by Reuse of Wastewater: An Ecological and Human Health Risk Perspectives -- Chapter 4. Biological Wastewater Treatment for Prevention of River Water Pollution and Reuse: Perspective and Challenges -- Chapter 5. Climate Change and Sustainable Management of The Rivers System with Special Reference to The Brahmaputra River -- Chapter 6. Effects of Climate Change on Reuse of Waste Water for Aquaculture Practices -- Chapter 7. Bio-Processes for Wastewater Reuse: Closed Loop System for Energy Options -- Chapter 8. Subsurface Processes Controlling Reuse Potential of Treated Waste Water Under Climate Change Conditions -- Chapter 9. Removal of Organic Pollutants from Industrial Wastewaters Treated by Membrane Techniques -- Chapter 10. Assessing the Impacts of

Temperature, Precipitation and Land Use Change on Open Water Bodies of Middle Ghaghara River Basin -- Chapter 11. Climate Change, Water and Wastewater Treatment: Interrelationship and Consequences -- Chapter 12. Treatment of Wastewater Using Vermifiltration Technology -- Chapter 13. Reuse of Wastewater in Agriculture -- Chapter 14. Application of The Ecological Network Analysis (ENA) Approach in Water Resource Management Research: Strengths, Weaknesses, And Future Research Directions. .

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## Sommario/riassunto

Water - a basic element of life, livelihood, food security and sustainable development - holds the key to global sustainability. The global water demand has been increased 3-fold in the past five decades and only 0.4% of the total world's fresh water resources is available and accessible for use. The United Nations projected that half of all countries will face water scarcity by 2025 and more than one-third of the world's population could be affected by water stress by 2050. The water problem is rapidly intensifying in the Asian region, and around 700 million people do not have access to safe drinking water. Similarly, according to the Intergovernmental Panel on Climate Change (IPCC) report, by 2050, more than one billion people in Asia alone are projected to experience negative impacts on water resources as a result of climate change. Climate change is also putting extra pressure on and adversely affecting the global water cycle, leading to irregular precipitation, more floods and droughts and creating an imbalance between water supply and demand. The availability of safe water is a major global concern due to the rapidly increasing population, urbanization, unsustainable consumption patterns, and rapid shifts in land use. It is believed that reduced access to freshwater will have cascading consequences that will pose threat to global food security, livelihood security, and cause large scale migration and economic and geopolitical tensions. As such, strategies for water conservation, wastewater reuse and recycling should be adopted in order to lessen the gap between supply and demand for water for different activities. This book provides readers with a better understanding of the water security challenges, and presents innovations to address these challenges, strengthen the science-policy interface, and develop institutional and human capacities for water security and sustainability.

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