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Nota di contenuto	Chapter 1. Microbes and Microplastics Interactions in Fresh Water Ecosystems: Fate and Implications for Environmental Health -- Chapter 2: Release of Microplastics by Terrestrial Sources into Freshwater Environments -- Chapter 3. Understanding various pathways of microplastic pollution in freshwater systems -- Chapter 4: Distribution pattern of microplastics in aquatic sources -- Chapter 5. Tracing the Path: Fate and Transport of Microplastics from Aquatic Systems to Soils -- Chapter 6. Techniques for sampling, detection, and characterization of microplastics in water, sediment, and tissue samples -- Chapter 7. Advances in microplastics research in freshwater ecosystems: An overview of newly developed separation and identification methods -- Chapter 8. Impact of Microplastics on Human Health -- Chapter 9. Microplastics and Aquatic Limnology: Conception of Biogeochemical Processes -- Chapter 10. Microplastics Occurrence in Sediments and Associated Ecological Risk: A Study of Saurashtra Coastline, Gujarat,

India -- Chapter 11. From Cradle to Contamination: The Lifecycle of Plastics with an Emphasis on Household Waste and Remediation via Biochar -- Chapter 12. Microplastic Pollution: Review of Degradation, Detection, and Treatment Technologies -- Chapter 13. Microplastic Remediation in Aquatic Environment.

Sommario/riassunto

This edited book delves into the critical issue of microplastic pollution in freshwater ecosystems, offering a comprehensive analysis of its occurrence, detection, and fate. It focuses on the latest research and methodologies for identifying and mitigating the adverse effects of microplastics on aquatic life and ecosystem health. The chapters cover a wide range of topics including the release of microplastics into freshwater sources, their transport mechanisms, their ultimate fate, and their impacts on both flora and fauna. Expert contributors provide detailed insights into the detection strategies and pretreatment methodologies necessary for accurate assessment. The book also explores the entry of microplastics into humans through freshwater sources and their potential health impacts. Additionally, it addresses global distribution patterns and interactions between microplastics and other pollutants. This volume is an essential resource for scientists, policymakers, and environmental specialists dedicated to addressing the pressing issue of microplastic pollution. It provides a thorough understanding of the problem and offers practical solutions to preserve the integrity of freshwater ecosystems for future generations.
