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Nota di contenuto	Chapter 1_ An Introduction to the Functions and Ecosystems Services associated with aquatic macrophytes -- Chapter 2_ Factors structuring Aquatic Macrophytes -- Chapter 3_ Aquatic Macrophytes: Ecology, Function and Services in Niger Delta, Nigeria -- Chapter 4_ Environmental and Ecological Importance of Indian Aquatic Macrophytes -- Chapter 5_ Macrophytes used as complementary medicines for curing human ailments to facilitate livelihood opportunities -- Chapter 6_ Macrophytes and their role in wetland ecosystems -- Chapter 7_ Ecotoxicology of REEs in aquatic macrophytes and prospect for bioremediation of REEs -- Chapter 8_ Efficiency of Aquatic Plants for Remediation of Wastewater -- Chapter 9_ Phytoremediation of organic contaminants: An ecofriendly approach based application of aquatic macrophytes -- Chapter 10_ Remediation of heavy metals by different aquatic macrophytes -- Chapter 11_

Translocations of heavy metals in aquatic macrophytes naturally grown in the riverine ecosystem -- Chapter 12_ Enhanced Effluent Treatment and Bioelectricity Generation Using Coupled Constructed Wetland-Microbial Fuel Cell (CW-MFC) Technology: Challenges and Opportunities -- Chapter 13_ Role of microbial communities and aquatic macrophytes in constructed wetlands for tannery wastewater treatment: Challenges and opportunities -- Chapter 14_ Role of plant-bacteria association in constructed wetlands for the removal of iron (Fe) from contaminated water. .

Sommario/riassunto

This book is a comprehensive collection of information about the features, functions, and services of aquatic macrophytes. As primary producers, aquatic macrophytes form the basis of food webs, play a major role in highly productive aquatic ecosystems, and have a significant impact on ecosystem functions and services. Macrophytes are also known to strongly influence the micro-climate and biogeochemical processes occurring in the littoral zones of marine ecosystems and the sediment dynamics of freshwater systems. They also serve as highly effective carbon sinks and play an important role in carbon sequestration. This book deals with various aspects of aquatic macrophytes, including nutrient recycling, biogeochemical processes, biomass production, wetland ecosystems, water resource management, carbon sequestration, environmental clean-up, and bioenergy production. Additionally, it presents the current status of aquatic macrophytes and discusses the impact of climate change on these plants. The book also highlights the major challenges associated with harnessing the benefits provided by aquatic macrophytes as ecosystem services. The book holds value and relevance for academicians and scientists working in the related domain. Additionally, it will serve as a valuable resource for students and researchers working in the field of ecology, biogeochemistry, wetland conservation, phytoremediation, elements biomonitoring, wastewater management, bioenergy production, etc.