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Nota di contenuto	1 Microbial Inoculants Assisted Phytoremediation for Sustainable Soil Management -- 2 Phytoremediation of Salt-Impacted Soils and Use of Plant Growth Promoting Rhizobacteria (PGPR) to Enhance Phytoremediation -- 3 Successful Integrated Bioremediation System of Hydrocarbon-Contaminated Soil at a Former Oil Refinery Using Autochthonous Bacteria and Rhizo-Microbiota -- 4 Phytoremediation of Petroleum Contaminated Soil in Association with Soil Bacteria -- 5 The Use of Higher Plants in Biomonitoring and Environmental

Bioremediation. Possibilities of Woody Plants Use in Biomonitoring and Bioremediation -- 6 Phytoremediation Applications for Metal Contaminated Soils Using Terrestrial Plants in Vietnam -- 7 Essential Elements and Toxic Metals in Some Crops, Medicinal Plants and Trees -- 8 Phytoremidiaion Using Aquatic Macrophytes -- 9 Remediation of Pharmaceutical and Personal Care Products (PPCPs) in Constructed Wetlands–Applicability and New Perspectives -- 10 Floating Wetlands for the Improvement of Water Quality and Provision of Ecosystem Services in Urban Eutrophic Lakes -- 11 Green Aquaculture: Designing and Developing Aquaculture Systems Integrated with Phytoremediation Treatment Options -- 12 Modeling the Phytoremediation: Concepts, Models and Approaches -- 13 Genetic Control of Metal Sequestration in Hyperaccumulator Plants -- 14 Engineered Nanomaterials for Phytoremediation of Metal/Metalloids Contaminated Soils: Implications for Plant Physiology -- 15 Phytoremediation Application: Plants as Biosorbent for Metal Removal in Soil and Water -- 16 Nutrient Management Strategies for Coping with Climate Change in Irrigated Smallholder Cropping Systems in Southern Africa -- 17 Phytoremediation of Landfill Leachates -- 18 Phytomining of Rare and Valuable Metals -- 19 Air Phytoremediation.

Sommario/riassunto

This text details the plant-assisted remediation method, “phytoremediation”, which involves the interaction of plant roots and associated rhizospheric microorganisms for the remediation of soil contaminated with high levels of metals, pesticides, solvents, radionuclides, explosives, crude oil, organic compounds and various other contaminants. Many chapters highlight and compare the efficiency and economic advantages of phytoremediation to currently practiced soil and water treatment practices. Volume 5 of Phytoremediation: Management of Environmental Contaminants provides the capstone of the series. Taken together, the five volumes provide a broad–based global synopsis of the current applications of phytoremediation using plants and the microbial communities associated with their roots to decontaminate terrestrial and aquatic ecosystems. .