1. Record Nr. UNINA9910637715603321

Titolo	Bio-Inspired Land Remediation / / edited by Vimal Chandra Pandey
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2023
ISBN	9783031049316 9783031049309
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (493 pages)
Collana	Environmental Contamination Remediation and Management, , 2522-5855
Disciplina	605 628.55
Soggetti	Ecology Pollution Food - Safety measures Environmental Sciences Food Safety
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Bioenergy crop-based ecological restoration of degraded lands -- 2. Understanding the role of ruderal plant species in restoration of degraded lands -- 3. Utilizing polluted lands for growing crops -- 4. Plant Assisted Bioremediation of Heavy Metal Polluted Soils -- 5. Cutting-edge tools to access microbial diversity and their function in land remediation -- 6. Endophytic microbes and their role in land remediation -- 7. Fungal-based land remediation -- 8. Microbial detoxification of contaminated land -- 9. Vermi-remediation of metal (loid)s contaminated surfaces -- 10. Fly ash Management through Vermiremediation -- 11. Management of biomass residues using vermicomposting approach -- 12. Vermiremediation of agrochemicals, PAHs and crude oil polluted land -- 13. Biochar-based remediation of heavy metal polluted land -- 14. Soil carbon sequestration strategies: Application of biochar an option to combat global warming -- 15. Remediation of pharmaceutical and personal care products in soil using Biochar -- 16. Biochar for improvement of soil properties -- 17.

Biochar production and its impact on sustainable agriculture.

Sommario/riassunto

Land is fundamental to the human life. The upper layer of land is a non-renewable resource, and source of food. Therefore, land health is essential to long-term food security and to promote sustainable livelihoods. On account of urbanization, industrialization and population growth, land pollution is one of the major issues worldwide. As a result, land pollution is continuing across the world, and has been linked with a wide range of potentially toxic contaminants at rates that deteriorate land quality. Land pollution can result either anthropogenic activities or natural activities. The major contaminants of land pollution are metalloids, petroleum hydrocarbon, radioactive elements, polyaromatic hydrocarbons (PAHs), Pesticide, other organic pollutants, etc. that comes from different types of sources. In urban and peri-urban areas, irrigation of agricultural land with polluted water is also a reason of land pollution. Therefore, land security is an important issue for future sustainability. Its remediation and management are important issue worldwide to protect land quality and functions. Land pollution means degradation of earth's surface. Polluted land comes under the category of degraded land. Hence, the remediation of polluted land is essential for regaining biodiversity and ecosystems services and thereby achieving United Nations-Sustainable Development Goals (UN-SDGs).This fact showed the need to develop research into land remediation. Bio-inspired land remediation has undergone a huge development. Therefore, Biomanagement has a lot of potential to secure upper earth’s surface through the land remediation programs targeted during the United Nations Decade on Ecosystem Restoration (2021-2030). This book explores the remediation of land pollution that includes Phytoremediation, Bioremediation (bacterial remediation and fungal remediation), Vermiremediation, Biochar-based remediation and other Bio-inspired remediation. This book will be a remarkable asset for research scholars, environmentalists, ecological scientist, agriculturist, practitioners, policy makers, entrepreneurs, and other stakeholders alike.