

Bio-geo interactions in metal-contaminated soils

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Abstrak

Metal contamination is an increasing ecological and eco-toxicological risk. Understanding the processes involved in metal mobilization, sorption and mineralization in soils are key features for soil bioremediation. Following an introduction to the physical, chemical and biological components of contaminated soils, various chapters address the interactions of soil, microorganisms, plants and the water phase necessary to transfer metals into biological systems. These include topics such as potential hazards at mining sites; rare earth elements in biotic and abiotic acidic systems, manganese redox reactions, biomineralisation, uranium in seepage water, metal-resistant streptomycetes, mycorrhiza in re-forestation, metal (hyper)accumulation in plants, microbial metal uptake, and their potential for bioremediation.