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| Nota di contenuto | Geological Substrates and Heaping Process of Coal Mining Operations in the Sokolov Basin, Czech Republic : Implications for Reclamation and Soil Development / Petr Rojik -- Humus Accumulation and Humification during Soil Development in Post-Mining Soil / Evgenij Abakumov and Jan Frouz -- Vegetation Development in Central European Coal Mining Sites / Karel Prach -- Biological Soil Crusts in Post-Mining Areas / Alena Lukesova, Martina Zahradnikova and Jan Frouz -- Soil Properties and Development of Humus Forms in Pine and Oak Stands of Reclaimed Post-mining Sites in Lusatia : Influence of Lignite from Overburden Sediments and Dust Immissions / Oliver Bens and Reinhard F. Huttl -- Plant Production, Carbon Accumulation and Soil Chemistry at Post-Mining Sites / Jan Frouz, Petr Dvorscik, Olga Vinduskova and Emil Cienciala -- Soil Microflora Development in Post-mining Sites / Jan Frouz, Dana Elhottova, Petr Baldrian, Alice Chronakova, Alena Lukesova, Alena Novakova and Vaclav Kristufek -- |

Macrofungi in Post-mining Sites / Lucie Zibarova and Anna Lepsova -- Interactions of Plants with Arbuscular Mycorrhizal Fungi during Ecosystem Development at Post Mining Sites in the Most Coal Basin (Czech Republic) / Jana Rydlova, David Puschel, Martina Janouskova and Miroslav Vosatka -- Recovery and Colonization at Post-mining Sites by the Soil Microfauna / L. Hanel, M. Devetter and S. Adl -- Soil Macro- and Mesofauna Succession in Post-mining Sites and Other Disturbed Areas / Jan Frouz, Vaclav Pizl, Karel Tajovsky, Josef Stary, Michal Holec and Jan Materna -- The Role of Soil Macrofauna in Soil Formation and Carbon Storage in Post-mining Sites / Jan Frouz -- Soil Fauna Plant Interactions during Succession at Post-mining Sites / A. Roubickova, O. Mudrak and J. Frouz -- Soil Fauna and Soil Physical Properties / Jan Frouz and V. Kuraz -- Mining Land and Similar Habitats : A Barren Land or a New Wilderness in the Cultural Landscape? / Tomas Gremlica -- Soil Biota and Ecosystem Development in Post-Mining Sites : Conclusions and Practical Implications / Jan Frouz.

Sommario/riassunto

Mining supplies numerous raw minerals that are essential for economic development. In many cases, however, mineral extraction causes severe destruction of the environment. Large areas can be literally erased by excavation and dumping of overburden. In addition, mining and postprocessing of raw materials may accelerate weathering processes and chemically alter the environment through, for example, acidification or pollution by heavy metals. Environmental damage brings the necessity for ecosystem reconstruction in affected areas. Numerous approaches to land reclamation have been developed. Natural processes collectively referred to as ecological succession, however, bring about gradual ecosystem development without the assistance of man. These processes may be relatively slow, particularly in their early stages, but there are many examples of how they have led to the development of functional ecosystems in the long-term, typically after several decades. In this book, we pay attention to the study of these successional processes. Firstly, only comparisons between the results of reclamation technologies and those of natural succession at unreclaimed sites of the same age can provide us with real information about the added value of reclamation. Secondly, a better understanding of natural succession processes may inspire numerous future improvements to restoration technologies. Finally, post-mining sites represent an excellent model for studying succession processes and may substantially improve our knowledge about these ecological phenomena--Provided by publisher.