

Soil Biology

Muhammad Zaffar Hashmi · Ajit Varma
Editors

Environmental Pollution of Paddy Soils

 Springer

Soil Biology

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Chapter 3

Environmental Pollution of Soil and Anthropogenic Impact of Polymetallic Hydrothermal Extractions: Case Study—Bregalnica River Basin, Republic of Macedonia



Biljana Balabanova, Trajče Stafilov, and Robert Šajn

3.1 Introduction

The distribution of certain chemical elements, which in higher contents represent hazard to the environment, causes certain unwanted consequences on human health (Brulle and Pellow 2006; Duruibe et al. 2007). Pollution of the environment with toxic metals has been topic of numerous studies which specify as their main subject matter the industrialized areas, the areas where exploitation and processing of natural resources (oil, ore, etc.) take place or highly populated areas where the traffic and communal waste represent the main sources of metals (Alloway and Ayres 1997; Siegel 2002; Järup 2003).

The exploitation of mineral resources by man leads to excavation, separation, transportation and dispersion of the metals contained in the fine dust (microparticles). In this way the metals are introduced into the environment in much greater contents than normally found in nature (Sengupta 1993; Salomons 1995). With the passage of time and the long-term activities of the human factor, the contents of certain metals have been completely and permanently changed in relation to their natural existence in the environment. These changes can have a significant influence

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