

Investigation on the Changes in the Chemical Composition and Ecological State of Soils Contaminated with Heavy Metals

Authors : Metodi Mladenov

Abstract : Heavy metals contamination of soils is a big problem mainly as a result of industrial production. From this point of view, this is of interests the processes for decontamination of soils for crop of production with low content of heavy metals and suitable for consumption from the animals and the peoples. In the current article, there are presented data for established changes in chemical composition and ecological state on soils contaminated from non-ferrous metallurgy manufacturing, for seven years time period. There was done investigation on alteration of pH, conductivity and contain of the next elements: As, Cd, Cu, Cr, Ni, Pb, Zn, Co, Mn and Al. Also, there was done visual observations under the processes of recovery of root-inhabitable soil layer and reforestation. Obtained data show friendly changes for the investigated indicators pH and conductivity and decreasing of content of some form analyzed elements. Visual observations show augmentation of plant cover areas and change in species structure with increase of number of shrubby and wood specimens.

Keywords : conductivity, contamination of soils, chemical composition, inductively coupled plasma-optical emission spectrometry, heavy metals, visual observation

Conference Title : ICHMEE 2018 : International Conference on Heavy Metals in the Environment and Ecosystems

Conference Location : Amsterdam, Netherlands

Conference Dates : January 22-23, 2018