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INTERNATIONAL SCIENTIFIC CONFERENCE
GREEN ECONOMY AND ADAPTATION
OF INDUSTRY TO CLIMATE CHANGES

COLLECTION OF ABSTRACTS

МЕЂУНАРОДНА НАУЧНА КОНФЕРЕНЦИЈА
ЗЕЛЕНА ЕКОНОМИЈА И АДАПТАЦИЈА
ПРИВРЕДЕ НА КЛИМАТСКЕ ПРОМЕНЕ
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Note: The authors bear full responsibility for the originality and content of their contributions.

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PHYSICO-CHEMICAL CHARACTERIZATION OF SOIL AND SEDIMENT SAMPLES

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A total of 54 samples of soil and sediment were analyzed during the first year of the Project RoRS 337 to the content of the following pollutants: As, Cd, Cr, Cu, Hg, Mo, Ni, Pb, Zn and Se using mass spectrometry with inductively coupled plasma and flow injection system for mercury determination by cold-vapor atomic absorption spectrometry. According to Serbian legislation for soil samples the content for almost all of the analyzed elements are above the Maximum Allowed Concentration (MAC). Some values for copper are even 100 times higher than the MAC values. The content of arsenic is above the MAC and Remediation values in 97.62% of analyzed samples. The elevated content of lead (52.38%), zinc (40.48%), chromium (19.05%), nickel (9.52%) and mercury (2.38%) comparing to MAC values is also recorded. The recorded content for copper from sediment samples are above the MAC for soil and sediment samples according to Serbian legislation in 83.33% of analyzed samples. The half of the analyzed sediment samples has higher values of lead and arsenic than MAC.

Keywords: soil, sediment, pollutants, maximum allowed concentration

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