



## **The Monitoration of Water Quality of Shkumbin River and Its Impact on the Soil<sup>#</sup>**

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**Abstract:** The Shkumbin River is one of the most important rivers in Albanian economy and its outlet is in the Adriatic Sea, in the southern part of Karavasta lagoon. The aim of the study is to monitor and estimate the quality of waters used for irrigation and the impact it has on agricultural soil. During four years (2004 – 2005) we have monitored in Sinabellaj, the Cengelaj dam, the Rogozine Bridge, these water parameters: salts contents, pH, electrical conductivity, cations and anions (  $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{Na}^+$ ,  $\text{CO}_3^{2-}$ ,  $\text{HCO}_3^-$ ,  $\text{Cl}^-$ ,  $\text{SO}_4^{2-}$ , nutrient elements: N (as  $\text{NO}_3^-$  and  $\text{NH}_4^+$ ,  $\text{PO}_4^{3-}$ ,  $\text{K}^+$ ; different factors: acidity, Na absorption ratio, dry residue, heavy metals: Zn, Pb, Mn, Fe, Cu, Cr. In the same time we took samples from agricultural soil were we monitored pH, humus, organic mass, N, P, K, Na, Ca, Mg etc, as well as microelements: Cu, Ni, Zn, Cr, Co, Pb etc. Through analytic monitoring of water, our purpose was to assess optimal parameters in the function of the evaluation of the quality of irrigation water, and the impact on the macro and microelements available for plant in the irrigation soil.

**Key words:** *irrigation, water quality, plant nutrients, soil, parameters*

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