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Assessment of Recharge in Lushnja Aquifer System Using Environmental Isotope Tracers

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The water supply in the region of Myzeqeja are dependent on groundwater reserves, contained mainly in quaternary gravel formations. The aquifer of Lushnja lowland, located between the river Shkumbin and the river Seman seems to shelter groundwater reserves that are of great importance for the population of the city of Lushnja. The first studies for Lushnja aquifer date from 1965. They were based only on hydrochemical and geological studies. The development of the area, population growth and the variation use of the water in intensive farming and climate changes that have occurred during these years have increased the demand of water supply. In these conditions was necessary to expand the studies on the assessment of this aquifer. In this paper it is discussed about the origin of the Lushnja aquifer groundwater by environmental isotopes measurements. In addition to the hydrochemical analyses, were determined the isotopic composition of the stable isotopes of hydrogen and oxygen. This study was conducted on water samples collected from boreholes, private wells and precipitations. The isotopic composition interval of the measurements of $\delta^2\text{H}$ ranges from -48.00‰ to -28.79‰ and for $\delta^{18}\text{O}$ the isotopic composition interval of the measurements ranges from -7.11‰ to -4.37‰ .

Country or International Organization

Albania

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