

## Geocological Problems of Karst Waters in Chiatura Municipality, Georgia

**Authors :** Liana Khandolishvili, Giorgi Dvalashvili

**Abstract :** Karst waters in the world play an important role in the water supply. Among them, the Vaucluse in Chiatura municipality (Georgia) is used as drinking water and is irreplaceable for the local population. Accordingly, it is important to assess their geo-ecological conditions and take care to maintain sustainability. The aim of the paper is to identify the hazards of pollution of underground waters in the karst environment and to develop a scheme for their protection, which will take into consideration both the hydrogeological characteristics and the role of humans. To achieve this goal, the EPIK method was selected using which an epikarst zone of the study area was studied in detail, as well as the protective cover, infiltration conditions and frequency of karst network development, after which the conditions of karst waters in Chiatura municipality was assessed, their main pollutants were identified and the recommendations were prepared for their protection. The results of the study showed that the karst water pollution rate in Chiatura municipality is highest, where karst-fissured layers are represented and intensive extraction works are underway. The EPIK method is innovative in Georgia and was first introduced on the example of karst waters of Chiatura municipality.

**Keywords :** cave, EPIK method, pollution, Karst waters, geology, geography, ecology

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