

Geographical Assessment of the “Kotiasklde” Karst Cave

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The current relief of the surrounding area of the “Kotiasklde” karst cave, located in the village of Sviri in the Chiatura Municipality, was formed through the interaction of endogenous and exogenous processes. In these areas, as well as within the structural plateau of Upper Imereti, various forms of exotektonic, petrogenic, erosional, karst, and anthropogenic relief are well represented. Different genetic types of relief almost entirely cover the territory of the village of Sviri and play a significant role in the formation of modern exodynamic processes.

As part of the geographical study of the “Kotiasklde” cave, 3D and point cloud modeling of the cave was carried out, along with the creation of a detailed cave map with observation points. Field observations were conducted at five points in December 2024 and March 2025. Ground-penetrating radar (GPR) technology was used to study the cave and the surrounding area, which revealed the main cave chamber and several smaller voids, particularly in the southeastern section. Profiling results showed that no additional cavities were detected at greater depths along the profiles. An important aspect of the research involved the study of water flow within the cave.

The lower section at the cave entrance, which is accessible only by crawling, requires planning and expansion for infrastructural purposes. This research represents an important step toward further exploration of the cave and the development of tourism or scientific infrastructure.