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**Radioecological monitoring of the Kvemo Kartli region, Bolnisi-Rustavi**

**Research project**

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**Tbilisi**

**2025**

# Radioecological monitoring of the Kvemo Kartli region, Bolnisi-Rustavi

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## *Annotation*

The research issue concerns the radioecological study of Kvemo Kartli soils, in particular, soil contamination with radionuclides and heavy metals. In particular, radionuclides K40, Cs137 and Sr90 and toxic heavy elements (Cu, Zn, Fe, Mn, Ni, Pb). Soil samples were taken and analyzed for their contamination. Several methodologies were used, samples were taken using the grid method at a depth of 20 cm, and mixed soil samples were also evaluated. The coordinates of the territory were plotted on the appropriate map. A full ecological assessment of the current situation was made. The conducted surveys and results showed information about the quality of the soil environment, and the contamination indices, which were determined according to the laboratory study of soil analysis, show that the contamination of the mentioned territory is increasing by several units. As for the territory of the Rustavi Metallurgical Plant and its surroundings, the background pollution to the east of the metallurgical plant exceeds the background in the territory adjacent to the park, and we can consider bulk slag as the main source of pollution in the park territory.

When comparing the results of 2021 and 2024 on the same route with a difference of 4 years, the indices have changed, these figures mean that the soil pollution index at the destination will increase further in the coming years. According to the conclusions of scientific studies, the mentioned area requires constant monitoring.