

Kvemo Kartli mining industrial pollution survey

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The most dangerous environment chemical pollutants are heavy metals and radionuclides. When engaging in the biochemical cycle of the living organism, they are hardly discharged from the body and cause pathological changes. In this regard, one of the most important in Georgia is the RMG mine, which is based on an open-pit mine, which causes intense contamination of the environment by toxic metals. Our research reflects the pollution of heavy soils in the region, based on preliminary estimates, based on the data already researched. 42 test areas were allocated, which included 21 villages in Bolnisi and Dmanisi. Copper (cu), manganese (mn), zinc, cadmium (cd) and lead (pb) were defined in brown, meadow, alluvial carbonate, and humus-carbonate soils spread in the study area. The resulting results showed that the copper is increased. Nakhridhi, Kazreti and Balichi. Mn, in comparison to the maximum permissible concentration, increased in Nakhiduri, Mushevani, Ratevani, Vardisubani, Balish, Potskhveriani, Tanzia, Kazreti soils. The increase in Cd was particularly noted in Ratevani, whose contents overcame other villages. Zn is very high, almost equal to the 2010 mark on Abulbuki and Rattedvani territory. The concentration of zinc in the samples taken in the Balichi and in the bottom of the Lower Bolnisi River exceeds the maximum permissible concentration, in the first case 219 units, in the second case 15 units. There is a significant increase in Zn concentration in villages: Balichi, Abulubuki and Ratevani. Balichi and Abulbukhi is closest to the Sakdris field. Their lands are damaged by air intensified by the intensity of the quarry. In Ratevani, which is a little bit off, but is dirty with air and water, it is contradictory: Zn concentration is more than 1000 mg / kg, which means that Mashavera river water can help migrate to the depth of large part of the zinc. In 2010, we measured Zn, Cu and Cd in the Balichi and Ratevani. The high concentration of Zn has not been observed since then. Pb concentration has been increased in the vicinity of the enterprise and in the villages: Vardisubani, Mamshilo, Little Dmanisi, Abulubuki, Balichi, Darbazi, Potskhveriani, Kazreti, and the bottom of the Poladuri tributary. Pollution area and quality in the region increases every year. Increased number of Pb in the villages adjacent to the deposit is due to the toxicity, causing a serious threat to the health of the population.

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