

IMPACT OF MINING INDUSTRY FACILITIES ON RIVER WATER QUALITY

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Abstract – The changes in water quality of the Voghji River (Republic of Armenia) under the influence of mining industry facilities were studied. Three large copper-molybdenum and gold-polymetallic deposits, as well as two operating and three reclaimed tailing dumps are located in the Voghji River basin. Wastewater of the mining and refining facilities together with lotic water of tailings falls into the Voghji River, contaminating it with high levels of molybdenum, manganese, iron, copper, zinc, chromium, etc. The long-term hydrochemical study revealed that the water quality of the middle and lower streams of the river had been continuously contaminated within seven years. Due to the high levels of heavy metals, the water in this part of the river might be unsuitable and toxic for irrigation use.

Keywords: heavy metals, mining industry, wastewater, irrigation.