



QUANTIFICATION OF IMPACT AND RISK INDUCED IN SURFACE WATER BY HEAVY METALS: CASE STUDY – BAHLUI RIVER IASI

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Abstract

The purpose of this paper was to quantify the environmental impact and risk applying a new integrated method designed as a soft SAB. The evaluation of impact and risk induced in environment was performed for surface waters (Bahlui River, Iași), considering the presence of some minerals and heavy metals in surface water in high concentrations. The new method for integrated environmental impact and risk assessment that considers the pollutants concentration levels in surface water was developed for the considered case study. This new method has the advantages that it is very easy to be used by non environmental experts: it calculates the impacts and risks, correlated with measured concentrations of quality indicators for environmental component, considered representative in assessment process; it is not a subjective method because several mathematical steps are applied (the developed soft - **SAB**). Also, the lack of experience of evaluator doesn't influence the evaluation results that will reflect the real situation from the evaluated site, where the industrial activities are performed.

Keywords: environmental quality indicator, impact, risk, significance unit, surface water

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