



---

## **QUALITY RISK EVALUATION OF THE GROUNDWATER RESOURCES ON THE MOLDAVIAN AREA**

**Ioan Crăciun\*, Catrinel-Raluca Giurma-Handley, Ion Giurma**

*"Gheorghe Asachi" Technical University of Iasi, Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, Department of Water Construction and Sanitary Engineering, 65 Mangeron Blvd., 700050, Iasi, Romania*

---

### **Abstract**

The analysis over the underground water monitoring system and the collected data from survey drilling show that the underground water has an unsatisfactory quality due to some physical and chemical characteristics. Along with these, factors like the surface water pollution, the hydrodynamic exchange between surface and underground waters and the reintroduction in the agricultural activities of nitrates and phosphorus based fertilizers lowers, as well, the quality that it has been talked about. Moreover, the natural hydro-geochemical conditions and processes which take place in the substratum induce the passing in solution of the different acid ions and cations. In the same sense the pesticides and the zootechnical farms placed on the river meadows and the incorrect exploitation of the irrigation systems have facilitated the organically material mineralization in soil and the movement of the resulted substance toward depths. The paper's aim was to establish the state of groundwater resources from the Moldavian Area by analyzing the water quality data base. In this way we will identify the groundwater bodies that present a risk regarding exposure to the pollutants and to the chemical evolution.

*Key words:* groundwater body, groundwater quality, monitoring system, protection degree, risk analysis

---

---

\* Author to whom all correspondence should be addressed: e-mail: icraciun@tuiasi.ro