

**HYDROGEOCHEMICAL ASPECTS LINKED TO THE SHALLOW
GROUNDWATER QUALITY AT CRISTEȘTI (IAȘI COUNTY)**

CRISTINA OANA STAN^{1,4}, EMILIAN PANAITESCU², RALUCA ANDREEA
EFTIMIE³

¹„Al. I. Cuza” University of Iași, Department of Geology, 20A Carol I Blv., 700505, Iași,
Romania

²National Administration „Apele Române” – Prut Waters Directorate, 10 Văscăuțeanu,
700462, Iași, Romania

³Department of Mathematics and Statistics, McMaster University, ON, L8S 4K1, Canada

⁴Romanian Academy, Iași Branch, Geography Group, 8A Carol I Blv., 700505, Iași,
Romania

Abstract

The hydrogeochemistry of the shallow groundwaters from Cristești has been described by means of hydrogeochemical diagrams (Piper, Durov) and through the analysis of the hydrogeochemical changes that occur from the terraces area, at the foot of which the first drilling was carried out towards the aquifers conduit discharge area (Prut river). Thus, the $\text{HCO}_3^- - \text{Na}^+$ waters, are projected within the CAD range (calcite – anhydrite – dolomite), whereas the $\text{SO}_4^{2-} - \text{Na}^+$ waters ”migrate” towards gypsum/anhydrite and dolomite, as the calculated saturation indexes prove. The indicator that presents exceeding values of MAC, in all the drillings, is CCOMn.

Key words: shallow groundwater, water rock interaction, hydrogeochemistry, nitrates

¹ e-mail: cristina.stan@uaic.ro