

THE WATER SPRINGS - SOURCES FOR WATER SUPPLY AND IRRIGATION IN THE NISTRU RIVER BASIN

Maria Sandu^{a*}, Anatol Tarita^a, Raisa Lozan^a, Viorica Gladchi^c, Gheorghe Duca^b, Sergiu Turcan^a, Elena Mosanu^a, Afanasie Prepelita^d

^a *Institute of Ecology and Geography, 1, Academiei str., Chisinau MD-2028, Republic of Moldova*

^b *Academy of Science of Moldova, 1, Stefan cel Mare Blvd., Chisinau MD-2001, Republic of Moldova*

^c *State University of Moldova, 60, Mateevici str., Chisinau MD-2009, Republic of Moldova*

^d *Hydro-Geological Expedition of Moldova, Republic of Moldova*

* *e-mail: sandu_mr@yahoo.com, phone: (+373 22) 73 15 50; 72 17 74*

In Memory of Valeriu Ropot for his scientific contributions in Waters Protection

Abstract. The present study estimates chemical composition and status of the groundwater from the Nistru (Dniester) river basin (about 360 springs and fountains). Research includes defining of springs/fountains location, evaluating physicochemical features of water, highlighting of main pollutants and pollution sources, establishing of water type and quality. It was established that springs/fountains with water that meets the criteria for drinking scope constitute 21%, sanitary acceptable for consumption is water from 129 springs/fountains, with high content of dissolved salts (mineralization >1000 mg/dm³) and hardness exceeding 10 me/dm³ (very hard water) were in 18.5% of sources and approximately 25% of the springs are water polluted with nitrates and its content is more than the MAC from 1 to 6 times.

Keywords: groundwater, chemicals state, pollution sources, correlation of components, water type and qualification.