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## **WATER QUALITY ASSESSMENT IN THREE MOUNTAINOUS WATERSHEDS FROM EASTERN ROMANIA (SUCEAVA, OZANA AND TAZLAU RIVERS)**

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### **Abstract**

Water quality is a very important aspect in the perspective of durable, urban and rural development. At European level, several directives were implemented, with the purpose of regulating the degree of pollution for water sources. Both surface and underground water resources in Romania are being affected by pollutants, such as nitrites, phosphorus, generated through irrational usage of chemical fertilizers, but also through the discharge of urban waste water directly into river courses. The spatio-temporal analysis of water quality in North-Eastern Romania, for Suceava, Ozana and Tazlau drainage basins, was based, in the current study, on the water quality index that has been applied (WQI), and also the variation rate of water quality (R).

The results have pointed out the fact that there are no substantial differences concerning water quality, on a North-South direction, but a decrease in the values of these parameters can be observed from upstream, to downstream, for each basin. WQI is associated with a Good Water Quality class, for Suceava river basin (with a value of 39.78), and also for Tazlau basin (with a value of 33.31), but Ozana basin has a value of 16.09, being associated with an Excellent Water Quality class. The results generated by the calculation of the water quality variation rate have emphasized the fact that 57% of the analyzed parameters reveal a worsening tendency, in Suceava and Tazlau drainage basins, while Ozana basin has a value of only 28%.

*Key words:* Ozana, quality parameters, spatio-temporal variation, water quality variance rate, water quality index

*Received: February, 2016; Revised final: July, 2016; Accepted: December, 2016*

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