

**THE IMPACT OF INDUSTRIAL POLLUTION ON WATER QUALITY  
IN GALATI CITY**

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**Abstract**

An important research topic approached by our team of experts is represented by the identification and categorization of the Danube water in Galati city in water quality classes based on an algorithm which takes into consideration various physico-chemical and biological parameters upstream and downstream, in the lower Danube area up to the point where the river flows into the Danube Delta and in some lakes found in the Danube Delta. This area is sensitive due to the industrial agents existing in the area (a steel mill and two important shipyards), to the two major urban centers Galați and Brăila (with over 500,000 inhabitants) and to the two large rivers the Siret and the Prut whose points of confluence with the Danube are in this area.

The present paper provides the values measured for 17 physico-chemical and biological parameters which were monitored for a three-year period (2016-2018): pH, BOD, COD, OD, P-PO<sub>4</sub>, N-total, N-NO<sub>3</sub>, N-NH + 4, SO<sub>2</sub>-4, Cl<sup>-</sup>, Cr<sup>3+</sup>, Pb<sup>6+</sup>, Total Fe, Zn<sup>2+</sup>, Phytoplankton and Chlorophyll. The sampling and physico-chemical analyzes of the samples were performed according to the standards in force.

The inclusion/ categorization of the Danube water in quality classes was achieved/made by using the WQI and the Water Pollution Index (WPI).

The conclusions drawn pointed out the fact that the Danube water in the area of Galati corresponds to Quality Class 2 and that the industrial waters from the industrial agents in the area are treated properly.

**Keywords:** industrial pollution, physico-chemical parameters, biological parameters, WPI, WQI