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## ASSESSMENT OF WATER QUALITY OF THE DANUBE RIVER USING WATER QUALITY INDICES TECHNIQUE

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### **Abstract**

In this paper, six different water quality indices were selected to assess the water quality for different uses and to identify the suitability of the selected indices in the assessment of the Danube River through a comprehensive comparison, in addition, to provide information on the spatial and temporal variations of the river water quality. The selected water quality indices are the Canadian Council of Ministers of the Environment Water Quality Index (CCME-WQI), Oregon Water Quality Index (OWQI), Aquatic Toxicity Index (ATI), Universal Water Quality Index (UWQI), Overall Index of Pollution (OIP) and the Bascaron Water Quality Index (BWQI). Water quality dataset of 13 parameters obtained from 4 sampling points during a one-year monitoring period was considered in this study. The results demonstrated that the CCME WQI gave reasonable results in comparison to the raw data of the Danube River. The results of the other indices did not introduce representative outcomes of the raw data of the river. It was observed that some of these indices were biased and others have an eclipsing problem. However, these indices may be applicable to other water bodies.

*Key words:* Danube river, Drobeta-Turnu Severin, water quality assessment, water quality indices

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