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# Assessment of Spatial and Seasonal Water Quality Variation of the Upstream and Downstream of Oum Er-rabia River in Morocco

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***Abstract:*** The aim of this study was to assess changes in physicochemical parameters and nutrient concentrations with the season and to generate helpful data for water quality managers. The physicochemical properties of the river investigated were all within the recommended range of acceptable water quality (Temperature: 13.3 - 25.9; pH: 7.84 - 8.63; DO: 4.2- 9.2 mg $l^{-1}$) except for salinity which was higher than recommended threshold. However, the concentrations of heavy metals were negligible at the upstream, but the suspended matter was higher at the upstream (94 mg $l^{-1}$) than that of the downstream (0.026 mg $l^{-1}$). Water surface in the region of oum Er-rabia has good water quality with high concentration of salinity and is suitable for drinking purposes after treatment.

***Keywords***: Physicochemical parameters, Nutrients, Water quality, Oum Er- rabia