

Geochemistry of Nutrients in the South Lagoon of Tunis, Northeast of Tunisia, Using Multivariable Methods

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Abstract : Understanding ecosystem response to the restoration project is essential to assess its rehabilitation. Indeed, the time elapsed after restoration is a critical indicator to shows the real of the restoration success. In this order, the south lagoon of Tunis, a shallow Mediterranean coastal area, has witnessed several pollutions. To resolve this environmental problem, a large restoration project of the lagoon was undertaken. In this restoration works, the main changes are the decrease of the residence time of the lagoon water and the nutrient concentrations. In this paper, we attempt to evaluate the trophic state of lagoon water for evaluating the risk of eutrophication after almost 16 years of its restoration. To attend this objectives water quality monitoring was untaken. In order to identify and to analyze the natural and anthropogenic factor governing the nutrients concentrations of lagoon water geochemical methods and multivariate statistical tools were used. Results show that nutrients have duel sources due to the discharge of municipal wastewater of Megrine City in the south side of the lagoon. The Carlson index shows that the South lagoon of Tunis Lagoon Tunis is eutrophic, and may show limited summer anoxia.

Keywords : geochemistry, nutrients, statistical analysis, the south lagoon of Tunis, trophic state

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