



## Monitoring some ecological affected parameters of water quality of the Gomishan Lagoon, south-east of Caspian Sea

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### Abstract

Wetlands are considered among the most productive ecosystems and key service providers to humankind. Coastal lagoons in particular being in the boundary or ecotone, between the land and the sea, are delicate and dynamic ecosystems, exposed to frequent fluctuations and alterations. Hydrodynamic processes include forcing by meteorology, fluctuations in sea level, winds and spatial/temporal variability of salinity and temperature. In the present study the six months variability of the some physico-chemical water quality parameters of Gomishan coastal lagoon, located in the south-east coast of the Caspian Sea, subjected to scarce human activity was characterized. All the parameters were sampled monthly from July to December 2010. Due to the varying water levels of the Caspian, the coastal habitats are constantly changing. A multivariate analysis indicated that water temperature behavior was related to the seasonal pattern, and pH did not show significant temporal differences. The mean concentration of BOD in autumn was higher than in summer, suggesting a high load of dissolved organic matter added from decomposition of the organic materials in the water by bacteria. The temporal variations of water salinity in the lagoon are in equilibrium between the temperature and the sea water exchange. These suggest that water depth and residence times, play an important role on the biochemical processes in Gomishan coastal ecosystem.

Keywords: coastal lagoon, Hydrodynamic processe, water quality, human activity

