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Assessment of Environmental Changes in the Iraqi Marshes by Index of Biological Integrity

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ABSTRACT

Preventing water flow through the marshes in southern Iraq was a policy of the previous regime in Iraq during 1990' s. This phenomena lead to tremendous structural changes in ecosystems, however after 2003 rehabilitation policy applied to the area was implementd in order to re-establish marshes ecosystems. In this study, a zooplankton Index of Biotic Integrity (Z-IBI) was measured for the first time in different sites in the Iraqi marshes. The following eight metrics were used: zooplankton ratio, relative abundance of Calanoid, relative abundance of Cyclopoid, relative abundance of Cladocera, relative abundance of Rotifera, biomass of tolerant species, biomass of sensitive species, and ratio of zooplankton biomass to phytoplankton biomass. Results of application of Z-IBI on the Iraqi marshes in this study indicate a slight improvement of water quality in the central marshes and degradation in other parts of the marshes. This work may fill part of the existing research gap in the application of the IBI index in Iraqi inland waters to illustrate the effects of previous deterioration in water quality.

KEYWORDS

IBI; Nature Iraq; Marshes; Aquatic Ecology

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