

**APPLIED OF PHYTOPLANKTON INDEX OF BIOLOGICAL INTEGRITY (P-IBI)
FOR ASSESSMENT OF ENVIRONMEN CHANGES IN THE EUPHRATES RIVER
IN AI-NASSIRYIA CITY/ IRAQ**

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ABSTRACT

Indices of Biological Integrity (IBIs) are being increasingly used as useful and direct tools for assessing general health of aquatic ecosystems. Eight metrics were selected for measuring P-IBI for the Euphrates river in Al-Nassiryia city in Iraq. The mean P-IBI scores showed better conditions in station 1 (Good) in autumn 2014 as compared to the station 2 (Poor)in summer2014 & station 3 (Poor) in winter 2015. However, the results generally indicated higher in autumn . Among the eight metrics comprising the index, total number of phytoplankton, relative abundance of Pennales had the most prominent effect on the P-IBI value in the station 2,3. Metrics such as Richness index and relative abundance of Cyanophyceae and Chlorophyceae also played a significant role in determining the index value. Continuous monitoring based on the selection of the most suitable metrics is recommended.

KEYWORDS: Assessment, IBI, Nature Iraq, Euphrates River, Al-Nassiryia City, Aquatic Ecology