Biological assessment with use of HFBI index in Shadegan wetland

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Abstract

This research was done in 6 stations in Shadegan wetland. Sampling was conducted in spring and summer, with four replications using Peterson grab. During the two seasons sampling, totally 16 species of 5 classes of macrobenthos were counted and identified. Among the identified groups the Gastropoda and Bivalvia were most common between two seasons. To understand the ecological situation of the region in terms of pollution, (Hilsenhoff family biotic index (HFBI) usedwith emphasis on organic matters. HFBI indicated the water quality ofstudy area in spring and summer in two classes of poor quality and relatively weak. According to the results of HFBI; stations 5 and 6 In the spring, ,and stations 1, 2 and 5 in summer showed poor quality, and other stations in the spring and summer classified in weak quality. Results of statistical analysis of HFBI showed that in spring, station 4 is significantly different from the other stations ($P<0.05$). The results showed the important role of sewage discharge into the wetland in increasing organic pollution of wetland and the necessity of environmental considerations and management of organic contaminants in wetland.

Key words: Shadegan wetland, Macro-invertebrates, Water quality, Hilsenhoff family biotic index (HFBI).