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Application of Water Quality Index for Assessment of Dokan Lake Ecosystem, Kurdistan Region, Iraq

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ABSTRACT

Water Quality Index (WQI) was applied in Dokan Lake, Kurdistan region, Iraq using ten water quality parameters (pH, Dissolved Oxygen, Turbidity, Conductivity, Hardness, Alkalinity, Sodium, Biochemical Oxygen Demand, Nitrate and Nitrite). The relative weight assigned to each parameter ranged from 1 to 4 based on the importance of the parameter for aquatic life. The results indicated that water quality of Dokan Lake declined from Good in the years 1978, 1979, 1980, 1999, 2000 and 2008 to Poor in 2009. The impact of various anthropogenic activities was evident on some parameters such as the EC and BOD. It is suggested that monitoring of the lake is necessary for proper management. Application of the WQI is also suggested as a very helpful tool that enables the public and decision makers to evaluate water quality of lakes in Iraq.

KEYWORDS

Water Quality Index, Water Resources, Dokan Lake, Nature Iraq

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