Abstracts

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Aquatic Plants as Ecological Indicator for Urban Lakes Eutrophication Status and Indices

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Abstract

There is an increasing pursuit of utilizing plants as a gear to predict, describe and diagnose environmental stresses. Being united swiftly with their environments, granting them to offer beneficial information on the condition of the aquatic environment. The aquatic plant species are effectively reliable indices as water status indicators. Their ability in taking up metal and toxic pollutants has shown their level of strength as well as tolerance in any concentration levels. Eutrophication is also being associated with the existence of aquatic plants. This widespread crisis in water bodies is made by over enrichment with N and P. Excess nutrients can trigger undesirable eutrophication, resulting in unhealthy algal blooms, spreading of certain aquatic macrophytes, depletion of oxygen and loss of key species, resulting in widespread degradation of many freshwater ecosystems. A broad number of physico-chemical parameters and biological characteristics render the degree of quality of water resources. Supervising above parameters is a crucial part to classify the magnitude and origin of any pollution load. The study was carried out to determine the levels of Nitrite (NO_2), Nitrate (NO_3) and Phosphate (PO_4), in different stations of urban lakes in Kuala Lumpur and Selangor. Data for physico-chemical parameter were classified according to the Interim National Water Quality Standard, Malaysia (INWQS). The significant outcome of this research is the abundance or loss of certain key species can be used as indicator for eutrophication state and level for urban lakes management and maintenance.

Keywords: Aquatic plants, Phytoindicator, Eutrophication, Urban lake, Ecological indicator