

Development and application of wetland zooplankton index to assess the degree of eutrophication in Sri Lankan reservoirs

*Mudiyanselage Jayantha Sisirakumara Wijeyaratne, Sangakkara
Mudiyanselage Ayanthi Indrach Sangakkara*

Abstract

Wetland Zooplankton Index (WZI) was developed for the low country intermediate zone of Sri Lanka using 20 reservoirs located between latitudes 7°20'22.081"N - 7°48'33.558"N and longitudes 80°1'44.55"E - 80°9'51.509"E. WZI ranged from 1.56 in Anukkane reservoir which is located in a low flat terrain in the midst of agricultural lands to 3.69 in Tampana reservoir which is located in a hilly area with a watershed mainly covered with forests. WZI showed a significant negative correlation with the Nitrate-N content ($r = -0.797$) and cumulative content of Nitrate-N and total phosphorus ($r = -0.795$) indicating that it can be used as an indicator of the degree of eutrophication of inland reservoirs in the low country intermediate zone of Sri Lanka.

Keywords

Wetland zooplankton index, Eutrophication, Nitrate, Phosphorus.