

**ASSESSMENT OF WATER EUTROPHICATION IN TASIK MELATI,
PERLIS**

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ABSTRACT

ASSESSMENT OF WATER EUTROPHICATION IN TASIK MELATI, PERLIS

Lake eutrophication has been extensively researched for many years and has become a crucial environmental problem as a result of the global impacts of anthropogenic activities and climate change. Tasik Melati is one of the most popular tourist attractions among residents and tourists in Perlis. Due to accelerating eutrophication levels brought on by increased atmospheric and anthropogenic nutrient inputs together with higher temperatures, Tasik Melati might no longer be sustainable for recreational ecosystem services. Accordingly, this study is proposed to determine the trophic state index of the Tasik Melati at different points by using Carlson's Trophic State Index (CTSI) compared to previous studies and to identify the algae biomass (indicated as chlorophyll a) relationship with the trophic state index and other physicochemical parameter (biochemical oxygen demand (BOD)). The primary indicators of lake eutrophication to be considered are chlorophyll-a (Chl-a), total phosphorus (TP), and Secchi depth (SD). The results show that the lake is eutrophicated because the CTSI trophic index values range from 35 to 73 overall. Domestic and agricultural waste that was either directly or indirectly deposited into the lake may have been the source of this. With the knowledge gained from this study, it is crucial that the public and farmers, especially those who live close to the lake are informed and take the appropriate measures.