

Intisari

VARIABILITAS KONSENTRASI KLOROFIL-A DI RAWA PENING, KABUPATEN SEMARANG PERIODE FEBRUARI-SEPTEMBER 2021

Rawa Pening yang terletak di Kabupaten Semarang, Provinsi Jawa Tengah adalah danau alami yang menjadi prioritas untuk diselamatkan dari masalah eutrofikasi. Konsentrasi klorofil-a merupakan salah satu parameter kualitas air yang dapat digunakan untuk mengetahui status trofik di Rawa Pening. Penelitian ini bertujuan untuk menginvestigasi variabilitas konsentrasi klorofil-a di Rawa Pening selama periode Februari-September 2021. Sampel air diambil setiap satu bulan sekali di dua stasiun, kemudian dianalisis menggunakan metode Spektrofotometri. Konsentrasi oksigen terlarut diukur menggunakan *Water Quality Checker* dan data curah hujan (GPM_3IMERGDF v06) dianalisis melalui laman Giovanni. Hasil penelitian menunjukkan konsentrasi klorofil-a tertinggi terjadi pada bulan September 2021 ($47,33 \text{ mg/m}^3$) dan terendah pada bulan April 2021 ($15,92 \text{ mg/m}^3$). Fakta ini menunjukkan bahwa Rawa Pening termasuk dalam kategori perairan eutrofik karena memiliki konsentrasi klorofil-a lebih tinggi dari 25 mg/m^3 . Lebih lanjut lagi, variabilitas konsentrasi klorofil-a, oksigen terlarut, dan curah hujan secara umum menunjukkan tren temporal yang sama selama periode penelitian, mengindikasikan bahwa curah hujan memiliki kontribusi penting terhadap kesuburan perairan Rawa Pening.

Kata kunci: curah hujan, klorofil-a, oksigen terlarut, Rawa Pening

Abstract

VARIABILITY OF CHLOROPHYLL-A CONCENTRATION IN RAWA PENING LAKE, SEMARANG REGENCY DURING FEBRUARY-SEPTEMBER 2021

Lake Rawa Pening that is located in the Semarang Regency, Central Java Province, is a natural lake that is a priority to be saved from eutrophication. Chlorophyll-a concentration is one of the water quality parameters that can be used to determine the trophic status of Lake Rawa Pening. This research aims to investigate the variability of chlorophyll-a concentration in Lake Rawa Pening during February-September 2021. Water samples were taken once a month at two stations, then were analyzed using the spectrophotometric method. Dissolved oxygen concentration was measured using water quality checker and rainfall data (GPM_3IMERGDF v06) were analyzed via Giovanni's website. Results showed that the highest chlorophyll-a concentration occurred in September 2021 (47.33 mg/m³) and the lowest in April 2021 (15.92 mg/m³). This observation suggests that Lake Rawa Pening is categorized as eutrophic waters with chlorophyll-a concentration greater than 25 mg/m³. Furthermore, the variability of chlorophyll-a concentration, dissolved oxygen, and rainfall showed the same temporal trend during the study period, suggesting a role of rainfall in affecting the fertility of Lake Rawa Pening.

Keywords: chlorophyll-a, dissolved oxygen, Lake Rawa Pening, rainfall