

## Intisari

### VARIABILITAS KONSENTRASI KLOOROFIL-A DI RAWA PENING PERIODE SEPTEMBER 2020 – JANUARI 2021

Rawa Pening adalah danau alami yang terletak di Kabupaten Semarang Provinsi Jawa Tengah dan memiliki manfaat secara ekologi, ekonomi, dan sosial bagi masyarakat sekitar. Konsentrasi klorofil-a memiliki peran vital pada status trofik ekosistem akuatik karena mengindikasikan biomassa fitoplankton, ketersediaan nutrisi dan sumber daya ikan. Namun demikian, studi tentang variasi konsentrasi klorofil-a di Rawa Pening belum pernah dilakukan. Penelitian ini bertujuan untuk mengetahui variabilitas bulanan konsentrasi klorofil-a di Rawa Pening periode September 2020 – Januari 2021. Pengambilan dan pengukuran sampel air dilakukan setiap bulan di sembilan stasiun, kemudian sampel air dianalisis menggunakan metode spektrofotometri. Hasil penelitian menunjukkan konsentrasi klorofil-a tertinggi ( $23,33 \text{ mg/m}^3$ ) terjadi pada bulan Desember, sedangkan konsentrasi klorofil-a terendah ( $12,64 \text{ mg/m}^3$ ) pada bulan Oktober. Variabilitas bulanan konsentrasi klorofil-a ini disebabkan variasi curah hujan yang menunjukkan tren yang sama, yaitu curah hujan tertinggi ( $18,72 \text{ mm}$ ) dan curah hujan rendah ( $12,33 \text{ mm}$ ) terjadi pada bulan Desember dan Oktober. Namun demikian, tren yang sama tidak terjadi pada bulan September. Konsentrasi klorofil-a tinggi pada bulan September ( $21,73 \text{ mg/m}^3$ ) diduga tidak diakibatkan curah hujan, namun disebabkan aktivitas-aktivitas antropogenik seperti kegiatan pertanian, warung makan apung, budidaya ikan, dan perahu wisata.

Kata kunci: Klorofil-a, monsun, nutrisi, Rawa Pening, turbiditas

## Abstract

### VARIABILITY OF CHLOROPHYLL-A CONCENTRATION IN LAKE RAWA PENING SEMARANG REGENCY DURING SEPTEMBER 2020 – JANUARI 2021

The Lake Rawa Pening is a natural lake located in Semarang Regency, Central Java Province and has ecological, economic, and social benefits for local community that live surrounding. Concentration of chlorophyll-a has a vital role in trophic status of aquatic ecosystems because it indicates phytoplankton biomass, availability of nutrient and fish resources. However, study on variation of chlorophyll-a in Lake Rawa Pening has not been carried out. This research aim to determine the monthly variability of chlorophyll-a in Lake Rawa Pening during September 2020 – January 2021. Samples of water were taken and measured once a month at nine different stations, then the samples were analyzed using spectrophotometric method. This result showed the highest chlorophyll-a concentration (23,33 mg/m<sup>3</sup>) occurred in December, while the lowest chlorophyll-a concentration (12,64 mg/m<sup>3</sup>) was in October. Monthly variability of chlorophyll-a concentration was caused by variations in rainfall that showed same trend, which the highest rainfall (18,72 mm) and low rainfall (12,33 mm) were in December and October. Moreover, the same trend didn't occur in September. The high concentration of chlorophyll-a in September (21,73 mg/m<sup>3</sup>) is suspected didn't happen because of rainfall, but due to anthropogenic activities such as agricultural activities, floating food stands, aquacultures, and tourist boats.

Keywords: Chlorophyll-a, Lake Rawa Pening, monsoon, nutrient, turbidity