

**PERBANDINGAN KOMUNITAS FITOPLANKTON
DAN PARAMETER FISIKOKIMIA AIR PADA BULAN KERING DAN
BULAN BASAH DI TELAGA CEBONG DATARAN TINGGI DIENG**

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INTISARI

Telaga Cebong yang berada di Dataran Tinggi Dieng, Jawa Tengah, mengalami pendangkalan akibat erosi tanah dari lahan pertanian kentang di sekitarnya yang disebabkan oleh air hujan pada bulan basah. Air hujan yang mengalir tidak hanya membawa partikel tanah akan tetapi juga residu pupuk dan fungisida yang digunakan pada pertanian kentang. Pada bulan kering ketika curah hujan rendah, Telaga Cebong dimanfaatkan untuk irigasi pertanian sehingga volumenya airnya berkurang. Perubahan karakter Telaga Cebong pada bulan basah dan bulan kering tersebut dapat berdampak pada organisme didalamnya, contohnya komunitas fitoplankton. Penelitian ini bertujuan untuk mempelajari jenis fitoplankton yang dapat ditemukan di Telaga Cebong, mempelajari perbedaan penyusun komunitas fitoplankton yang ditemukan di Telaga Cebong pada bulan kering dan bulan basah, serta mempelajari respon komunitas fitoplankton terhadap perubahan parameter fisiko-kimia pada bulan kering dan bulan basah. Sampel air dicuplik menggunakan ember 5 L. Pencuplikan sampel air dilakukan di 3 titik sampling. Sampel air disaring menggunakan plankton net. Sampel air dipreservasi menggunakan formalin 2%. Parameter fisiko kimia yang diukur antara lain kadar fungisida mancozeb dan propineb di air, kadar nitrogen dan fosfat di air, temperatur air, temperatur udara, transparansi air, DO air, alkalinitas air dan pH air. Total terdapat 25 jenis fitoplankton di Telaga Cebong. Komunitas fitoplankton Telaga Cebong pada bulan Oktober (bulan kering) maupun pada bulan Januari (bulan basah) tersusun atas 6 grup fungsional yaitu alga koloni, alga filamen, alga unisel, diatom *pennate*, diatom *centric*, dan dinoflagellata, densitas individu pada bulan Oktober (bulan kering) lebih tinggi yaitu 216.168 individu/15L, daripada bulan Januari (bulan basah) yaitu 88.035 individu/15L. Komunitas fitoplankton di Telaga Cebong merespon perubahan parameter fisikokimia berupa transparansi air, jeluk, pH air, alkalinitas air, temperatur air, kadar nitrat, sulfat, serta P-total dari bulan Oktober (bulan kering) dan bulan Januari (bulan basah).

Kata kunci: *fitoplankton, Telaga Cebong, bulan kering, bulan basah.*

COMPARISON OF PHYTHOPLANKTON COMMUNITY AND PHYSICO-CHEMICAL PARAMETERS OF WATER FOR DRY AND WET MONTHS IN CEBONG LAKE, DIENG PLATEAU

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ABSTRACT

Cebong lake is located in the Dieng Plateau, Central Java, experiences silting due to soil erosion from the surrounding potato farms caused by rainwater during the wet months. Run off not only carries soil particles but also residues of fertilizers and fungicides used in potato farming. In dry months when the rainfall is low, Cebong Lake is used for agricultural irrigation so that the water volume decreases. Changes in the character of Cebong Lake in the wet and dry months can have an impact on the organisms in it, for example the phytoplankton community. This study aims to study the types of phytoplankton that can be found in Cebong Lake, study the differences in phytoplankton community constituents found in Cebong Lake during the dry and wet months, and study the response of the phytoplankton community to changes in physico-chemical parameters in the dry and wet months. Water samples were sampled using a 5 L bucket. Water samples were sampled at 3 sampling points. The water sample was filtered using a plankton net. Water samples were preserved using 2% formalin. The physico-chemical parameters measured included levels of mancozeb and propineb fungicides in water, nitrogen and phosphate levels in water, water temperature, air temperature, water transparency, water DO, water alkalinity and water pH. In total there are 25 species of phytoplankton in Cebong Lake. The phytoplankton community of Telaga Cebong in October (dry month) and January (wet month) is composed of 6 functional groups, namely colony algae, filamentous algae, unicellular algae, pennate diatoms, centric diatoms, and dinoflagellates, individual density in October (month dry) was higher, namely 216,168 individuals / 15L, than in January (wet month), namely 88,035 individuals / 15L. The phytoplankton community in Cebong Lake responded to changes in physicochemical parameters in the form of water transparency, depth, water pH, water alkalinity, water temperature, levels of nitrate, sulfate, and P-total from October (dry month) and January (wet month).

Keywords: *phytoplankton, Cebong Lake, dry months, wet months.*

