

ABSTRACT

Intan Awaliyah Rosyadi. 2017. The Analysis of Phytoplankton Diversity in Cirata Reservoir Purwakarta Regency West Java. Under guided by Dra. Hj. Lilis Suhaerah, M.Kes. and Dita Agustian, M. Pd.

Phytoplankton is a microscopic organism that acts as a primary producer in a waters and becomes a biological parameter to evaluate the quality and level of water fertility. This study attempted to get the information in quantitative whose concern was about phytoplankton diversity value and described the condition of water in Cirata Reservoir, Maniis District, Purwakarta Regency, West Java. The method of this study was descriptive method which was *Belt Transect*. Moreover, *Plankton Net* was used as sampling technique. The stations of this study consisted of 4 stations that were divided into three quadrants. the variable of this study was the diversity of phytoplankton. the physic-chemical was measured such as temperature, pH, and Dissolved Oxygen (DO). The sample that has been conducted was analyzed by using Shannon - Winner diversity index. The phytoplankton that has been picked was identified until species level which used identification book of phytoplankton Sachlan (1982), Edmonson (1959), Bellinger dan Sigeo (2015), dan Davis (1955). The result of this study showed that the composition of that 29 species phytoplankton were obtained which were included in 4 classes: Bacillariophyceae (10 species), Chlorophyceae (5 species), Cyanophyceae (11 species), dan Dinophyceae (3 species). The diversity phytoplankton was range from 2.37 – 2.68 by the average value of diversity indeks 2.50. Moreover, the value of diversity indeks showed that phytoplankton in Cirata Reservoir had medium diversity and also showed that the condition of water di Cirata Reservoir, Maniis District, Purwakarta Regency, West Java was included in mild pollution category. The contaminated waters condition of Cirata Reservoir is also marked by the high value of dissolved oxygen content in the waters which has a value of 6.4 Mg / L.

Keywords: *Belt Transect*, **Cirata Reservoir**, **Diversity**, **Phytoplankton**, *Plankton Net*.

ABSTRAK SUNDA

Intan Awaliyah Rosyadi. 2017. Analisis Keanekaragaman Fitoplankton di Perairan Waduk Cirata Kabupaten Purwakarta Jawa Barat. Dibimbing Dra. Hj. Lilis Suhaerah, M. Kes. sareng Dita Agustian, M. Pd.

Fitoplankton mangrupikeun organisme mikroskopik anu berperan minangka produsen primer di hiji perairan sarta janten parameter biologi kanggo ngevaluasi kualitas jeung tingkat kesuburan perairan. Panalungtikan ieu miboga tujuan kanggo mikawanoh informasi tina bentuk kuantitatif ngeunaan nilei keanekaragaman fitoplankton sarta ngadiskripsikeun kaayaan perairan Waduk Cirata, Kacamatan Maniis, Kabupaten Purwakarta, Jawa Barat. Metoda anu digunakeun dina panalungtikan ieu nyaeta metoda deskriptif sareng desain panalungtikan nyaeta Belt Transect. Sampel dikumpulkeun ngagunakeun tehnik Plankton Net. Stasiun panalungtikan diwangun ku opat stasiun, sewang-sewang stasiun diwangun ku tilu kuadran. Variabel anu diteliti nyaeta Keanekaragaman fitoplankton. Faktor fisik-kimiawi anu diukur nyaeta suhu, pH, jeung oksigen terlarut (DO). Sampel fitoplankton dianalisis ngagunakeun indeks keanekaragaman (H') Shannon- Wiener. Sampel fitoplankton diidentifikasi nepi ka tingkat jenis ngagunakeun buku identifikasi fitoplankton Sachlan (1982), Edmonson (1959), Bellinger dan Sigeo (2015), sareng Davis (1955). Dumasar tina hasil panalungtikan ieu nunjukeun yen komposisi jenis Fitoplankton anu kapanggih aya 29 spesies ngawengku opat kelas nyaeta Bacillariophyceae (10 spesies), Chlorophyceae (5 spesies), Cyanophyceae (11 spesies), dan Dinophyceae (3 spesies). Indeks keanekaragaman (H') fitoplankton ngabogaan kisaran antara 2.37 – 2.68 sareng rata-rata nilai indeks keanekaragaman (H') nyaeta 2.50 nu tiasa nunjukeun yen fitoplankton di Waduk Cirata kagolong dina kategori sedeng sareng tiasa nunjukeun yen kaayaan perairan di Waduk Cirata, Kacamatan maniis, kabupaten Purwakarta, Jawa Barat kagolong dina kategori tercemar rendah. Kaayaan perairan Waduk Cirata anu kalawan tercemar ditandaan oge ku luhurna nilai kadar oksigen nu larut dina perairan eta nyaeta miboga nilai 6.4 Mg/L.

Sanggem Konci: Belt Transect, Keanekaragaman, Fitoplankton, Plankton Net, Waduk Cirata.