

Intisari

KUALITAS DAN STATUS PENCEMARAN BADAN AIR SUNGAI CODE YOGYAKARTA PADA AWAL MUSIM PENGHUJAN

Sungai Code melintasi 3 kabupaten di D.I.Yogyakarta yang memiliki peranan penting untuk masyarakat. Penelitian ini bertujuan untuk mengetahui kualitas air Sungai Code pada musim penghujan. Penelitian dilaksanakan bulan Desember 2019- Januari 2020 di Sungai Code, Yogyakarta. Pengambilan data dilakukan sebanyak 4 kali pada 6 stasiun. Pengambilan data kualitas air menggunakan sampel air dengan botol bervolume 1 liter kemudian di uji di laboratorium. Pengambilan data plankton menggunakan *plankton net* dengan sampling sebanyak 3 titik disetiap stasiun. Hasil yang dianalisis adalah data kualitas air dan data plankton yang meliputi indeks keanekaragaman, indeks kelimpahan, dan indeks dominansi. Data kualitas air yang diambil meliputi suhu air, kecepatan arus, kedalaman air, *Total Dissolved Solid* (TDS), *Total Suspended Solid* (TSS), derajat keasaman (pH), oksigen terlarut, *Biological Oxygen Demand* (BOD), amonia, fosfat, dan nitrat. Data kualitas air yang diperoleh yaitu suhu air 27,6-29,3⁰C; kedalaman air 20,5-26 cm; kecepatan arus 0,3-0,6 m/s; TDS 159-293 mg/L; TSS 68,6-87,3 mg/L; pH 7,3-7,6; O₂ terlarut 3,6-5,7 mg/L; BOD 1,7-4,0 mg/L; amonia 0,02-0,18 mg/L; fosfat 0,12-1,88 mg/L; dan nitrat 1,13-6,24 mg/L. Nilai Indeks Pencemaran (IP) berkisar antara 2,23 – 4,83 termasuk kategori tercemar ringan dengan parameter yang paling mempengaruhi adalah amonia dan fosfat. Parameter biologi pada indeks keanekaragaman plankton berkisar antara 1,32-3,58 termasuk kategori sedang-tinggi. Indeks kelimpahan plankton berkisar antara 54,17 sel/L-210 sel/L. Indeks dominansi plankton berkisar antara 0,07- 0,53 termasuk kategori rendah-sedang.

Kata kunci: indeks pencemaran, kualitas air, plankton

Abstract

**QUALITY AND POLLUTION INDEX
IN CODE RIVER YOGYAKARTA WATER BODIES
AT THE BEGINING OF THE RAINING SEASON**

Code River crosses 3 regencies in D.I.Yogyakarta, which has an important role in the public. This research aimed to know the water quality of Code River in the raining season. This research was conducted during December 2019-January 2020 in Code River, Yogyakarta. Data was taken 4 times in 6 stations. Water quality data was taken using water samples with 1 L bottles, then tested in the laboratory. Plankton data was taken using plankton net and sampling at 3 spots in each station. Data analysis consisted of water quality data and plankton data which include diversity index, abundance index, and dominance index. Water quality data consisted of water temperature, flow velocity, water depth, *Total Dissolved Solid* (TDS), *Total Suspended Solid* (TSS), *power of hydrogen* (pH), *Dissolved Oxygen* (DO), BOD, amonia, phosphate, and nitrate. Water quality data obtained were water temperature ranged from 27,6-29.3°C; water depth 20.5-26 cm; current speed 0.3-0.6 m/s; TDS 159-293 mg/L; TSS 68.6-87.3 mg/L; pH 7.3-7.6; dissolved O₂ 3.6-5.7 mg/L; BOD 1.7-4.0 mg/L; amonia 0.02-0.18 mg/L; phosphate 0.12-1.88 mg/L; and nitrate 1.13-6.24 mg/L. Pollution Index (PI) ranged from 2.23-4.83 with mildly polluted category with amonia and phosphate as most impact parameters. Biological parameters such as plankton diversity index ranged from 1.32-3.58 with medium to high category, plankton abundance index ranged from 54.17 cells/L - 210 cells/L, and plankton dominance index ranged from 0.07-0.53 with low to medium categories.

Key words: plankton, pollution index, water quality