



## Intisari

Penelitian ini bertujuan untuk mengetahui keanekaragaman hayati makrobentos dan tingkat pencemaran air Sungai Code Yogyakarta berdasarkan Indeks Biotik Famili makrobentos. Penelitian dilaksanakan pada bulan Juni-Juli 2016 di Sungai Code Daerah Istimewa Yogyakarta. Pengambilan data dilakukan sebanyak 4 kali pada 6 stasiun. Makrobentos diambil menggunakan *surber net* dengan ukuran 30 x 30 cm, dimana masing-masing stasiun dilakukan pengambilan sebanyak 5 titik. Hasil yang dianalisis adalah kerapatan individu, indeks keanekaragaman, indeks dominansi, dan Indeks Biotik Famili (IBF) makrobentos. Data kualitas air yang diambil meliputi suhu udara, suhu air, kecepatan arus, kedalaman air, jenis substrat, pH air, *dissolved oxygen*, dan bahan organik. Hasil penelitian menunjukkan bahwa suhu udara berkisar antara 28,75–30,63 °C, suhu air 27,94–30 °C, kedalaman air 0,16–0,26 m, kecepatan arus 0,28–0,44 m/detik, pH air 6,8–6,88, kandungan oksigen terlarut (DO) 5,66–6,77, dan bahan organik (BO) 7,07–13,27 ppm. Substrat pada keenam stasiun terdiri dari lumpur, lumpur berbatu dan pasir berbatu. Makrobentos yang ditemukan di Sungai Code sebanyak 554 individu. Kerapatan makrobentos berkisar antara 131–382 ind/m<sup>2</sup> yang terdiri dari 3 filum, 19 famili, dan 26 spesies. Nilai keanekaragaman 0,31–0,90 serta nilai indeks dominansi 0,19–0,62. Berdasarkan pengukuran Indeks Biotik Famili tingkat pencemaran organik Sungai Code Yogyakarta berkisar antara 5,35–7,56 yang menunjukkan perairan sudah termasuk dalam kategori tercemar sedang hingga tercemar sangat berat.

Kata kunci: indeks biotik famili, keanekaragaman, makrobentos, pencemaran, sungai



## Abstract

This research aimed to know the diversity of macrobenthos and water pollution level of Code River, Yogyakarta based on Family Biotic Index of macrobenthos. This research was conducted during June-July 2016 in Code River, Special Region Yogyakarta. Data were collected as 4 times in 6 stations. Macrobenthos were collected using 30 x 30 cm surber net. There were 5 spots in each station to sampling the macrobenthos. Analysis data were consisted of individual density, diversity index, dominance index, and Family Biotic Index (IBF) of macrobenthos. Water quality data were consisted of air and water temperature, water velocity, water depth, substrates, water pH, dissolved oxygen, and organic matter. The results showed that air temperature ranged from 28,75-30,63 °C, water temperature 27,94–30 °C, water depth 0,16-0,26 m, flow velocity 0,28-0,44 m/s, water pH 6,8-6,88, dissolved oxygen (DO) 5,66–6,77, and organic matter (BO) 7,07–13,27 ppm. Substrates in all stations were consisted of mud, rocky mud, and rocky sand. There are 544 individuals of macrobenthos that are found in Code River. Macrobenthos density in Code River ranged from 131-382 ind/m<sup>2</sup> were consisted of 3 phylum, 19 family, and 26 species. Diversity value was 0,31-0,90 with dominance index 0,19-0,62. Based on IBF, organic pollution level in Code River ranged from 5,35-7,56 which showed that water in Code River already included in the category of moderate to heavy polluted.

Keywords: diversity, family biotic index, macrobenthos, pollution, river.