



Intisari

Tujuan penelitian ini adalah untuk menginvestigasi kualitas air Sungai Code (di kawasan sebelum kota, dalam kota, dan setelah kota) dengan menggunakan bioindikator makrozoobentos dan menganalisis pengaruh parameter fisik-kimia lingkungan terhadap komponen makrozoobentos di Sungai Code.

Metode yang digunakan pada penelitian ini adalah metode penelitian survai. Pengambilan sampel makrozoobentos dan sampel air menggunakan metoda *purposive sampling*. Analisis kualitas air berdasarkan komponen makrozoobentos menggunakan pendekatan kelimpahan, keragaman, dominansi dan skor biotik. Analisis regresi digunakan untuk mengetahui pengaruh parameter fisik-kimia terhadap komponen makrozoobentos.

Hasil penelitian ini menunjukkan bahwa makrozoobentos dapat digunakan menelusuri kualitas air Sungai pada daerah sebelum kota, di dalam kota, dan sesudah kota. Berdasarkan kelimpahan, kawasan sebelum dan setelah kota tergolong tercemar sedang karena ditunjukkan dengan besarnya kelimpahan *Melanoides* dan *Limnaea* (makrozoobentos indikator perairan tercemar sedang); sedangkan di kawasan dalam kota makrozoobentos indikator perairan kotor melimpah yaitu *Tubifex* dan *Chironomus*. Berdasarkan keragaman kualitas air Sungai Code bagian sebelum kota dan sesudah kota tergolong bersih, sedangkan di kawasan kota tergolong tercemar ringan. Berdasarkan skor biotik kualitas air Sungai Code daerah dalam kota tergolong tercemar sedang, sedangkan di kawasan sebelum dan sesudah kota tergolong bersih. Parameter fisik-kimia air yang mempengaruhi makrozoobentos adalah TSS, BOD dan Fosfat. Regresi antara TSS dengan skor biotik menunjukkan bahwa TSS naik, skor biotik turun. Regresi antara BOD dengan keragaman menunjukkan BOD naik, keragaman turun. Regresi antara BOD dengan skor biotik menunjukkan BOD naik, skor biotik turun. Regresi antara fosfat dengan keragaman menunjukkan fosfat naik, keragaman turun.

Kata kunci: *Bioindikator, Makrozoobentos, Kualitas air, Penggunaan lahan*



Abstract

The aims of this research were to investigate the quality of Code River's water (from upper city, middle city, to lower city) using macrozoobentos as bioindicator and to analyse the effect of macrozoobentos with physical-chemistry of parametric environment of the Code River.

The method that were used on this research was survey research. Macrozoobentos and water sample taken by purposive sampling. Water quality analyse by macrozoobentos components with abundance, diversity, dominance, and biotic scoring value. Regression analyse was used to know such of effect by physical-chemistry with macrozoobentos component.

The result of this research finally got that the macrozoobentos could be used to explore the quality of the river's water on the upper city, middle city, and lower city. Based on abundance factor, the upper and lower city area was in moderately polluted indicate by value of richest factor of *Melanoides* and *Limnnaea* (macrozoobentos medium water polluted indicators), even thought at inner city the high polluted indicators was *Tubifex* and *Chironomus*. Based on diversity factor of the quality of Code River's water at forward and outer city area was clean, even though at the middle city was in lightly polluted. Based on biotic scoring value, the quality of Code River's water was in moderate polluted, even thought at the forward and outer city area was clean. The physical-chemistry parameters which effected by macrozoobentos was TSS, BOD, and Phosphate. Regression between TSS and biotic scoring value pointed that TSS was increase and the biotic scoring value decreased. Regression between BOD and diversity result that BOD was increased, and diversity decreased. Regression between BOD and biotic scoring value pointed by increase of BOD and decrease of biotic scoring value. Regression between Phosphate and diversity was result by increase of phosphate, and decrease of diversity.

Keywords: Bioindicators, Macrozoobentos, Quality of water, land used