



TINGKAT PENCEMARAN TELAGA OMANG BERDASARKAN FAKTOR FISIS, KEMIS, DAN BIOLOGIS PERAIRAN

Oleh:

Fregina Dasilva¹,

INTISARI

Telaga Omang merupakan telaga terluas di Kabupaten Gunungkidul. Kegiatan pemanfaatan air telaga oleh penduduk sekitar untuk memenuhi kebutuhan sehari-hari secara tidak langsung telah menyebabkan degradasi kualitas air. Hal ini diperparah dengan adanya perilaku membuang sampah plastik bungkus deterjen maupun sabun di pinggiran telaga. Ekosistem hutan yang berada di sekitar telaga pun dinilai tak lagi mampu mengembalikan fungsi ekologis telaga akibat pemanfaatan yang tidak terkendali tersebut. Untuk itu dilaksanakan penelitian yang bertujuan untuk mengetahui faktor fisis (suhu dan TDS), kemis (pH, DO, BOD, COD, deterjen), dan biologis (kepadatan plankton) dari perairan Telaga Omang yang dilanjutkan dengan mengukur tingkat pencemaran pada telaga tersebut.

Penelitian ini dilakukan dengan cara menentukan 10 titik pengambilan data yang tersebar menyeluruh pada pinggiran telaga. Titik awal pengambilan data ditentukan secara acak dan titik berikutnya ditentukan secara sistematis dengan jarak antartitik 200 hingga 250 meter. Dilakukan pengukuran maupun pengambilan data mengenai faktor fisis, kemis, dan biologis pada masing-masing titik pengambilan data yang mencakup bagian dekat hutan (I), agak jauh dari hutan (II), dan paling jauh dari hutan (III). Hasil yang diperoleh kemudian dikalkulasikan dengan rumus Indeks Pencemaran untuk mengetahui tingkat pencemarannya.

Hasil penelitian menunjukkan nilai indeks pencemaran masing-masing bagian telaga sebesar 1,93; 2,04; dan 2,03 yang artinya Telaga Omang termasuk dalam kategori cemar ringan. Variabel yang paling berpengaruh menyebabkan pencemaran di antaranya adalah DO, BOD, dan COD sebab ketiga variabel tersebut melampaui baku mutu air kelas I menurut Lampiran PP Nomor 82 Tahun 2001.

Kata kunci : tingkat pencemaran, indeks pencemaran, perairan, telaga

¹ Mahasiswa Fakultas Kehutanan Universitas Gadjah Mada



POLLUTION LEVEL OF LAKE OMANG BASED ON PHYSICAL, CHEMICAL, AND BIOLOGICAL FACTORS OF WATERS

By:

Fregina Dasilva¹,

ABSTRACT

Lake Omang is the largest lake in Gunungkidul Regency. The exploitation activity of its water by nearly society to fulfill daily needs has affected the degradation of water quality indirectly. This problem becomes more serious because of their bad behaviour such as throwing plastic bag from soap and detergent which they used into the border of the lake. Forest ecosystem which is located nearby from the lake has been considered losing its ability to rebuild the ecological function of the lake any longer because of the unbridled exploitation. Thus a research is held which aims to find out the physical factors (temperature and TDS), chemical factors (pH, DO, BOD, COD, detergent), and biological factor (plankton density) of Lake Omang in order to measure the pollution level which is occurred in the lake.

This research is held by determining 10 sampling points which are spreading thoroughly over the edge of the lake. The initial sampling point is determined randomly and the next sampling points are determined sistematically with distance 200 to 250 meters among them. Measuring and collecting sample of water about physical, chemical, and biological factors are done in each sampling points which include the nearest area from forest (I), area with medium distance (II), and the farthest (III) with three times of repetition. The result is calculated with Pollution Index formula to find out the level of the pollution.

The result of the research shows the value of pollution index of each part of the lake are 1,93; 2,04; and 2,03 which means Lake Omang is categorized into slight pollution. Several variables such as DO, BOD, and COD is evaluated having the biggest influence on water pollution which is occurred because of their value that have exceeded the standard quality of water for class I based on Annex of PP Nomor 82 Tahun 2001.

Keywords : pollution level, pollution index, waters, lake

¹ Student of Faculty of Forestry Universitas Gadjah Mada