ANALISIS STATUS MUTU AIR DAN SUMBER PENCEMAR DI SUNGAI KUNING KABUPATEN SLEMAN

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INTISARI

Status mutu air adalah tingkatan kondisi air yang menunjukkan kondisi tercemar atau kondisi baik pada waktu tertentu berdasarkan perbandingan dengan baku mutu air yang ditetapkan. Status mutu air diketahui dengan melakukan analisis terhadap data kualitas air terhadap baku mutu kelas peruntukan air. Penelitian ini dilakukan di Sungai Kuning, Kabupaten Sleman, Provinsi DIY. Sungai Kuning memiliki peran penting terhadap kebutuhan konsumsi masyarakat Kabupaten Sleman. Permasalahan yang terdapat pada Sungai Kuning berupa penggunaan lahan dominan pertanian dan permukiman. Limbah pertanian berupa pemupukan dan pengendalian hama masuk dan mengalir ke sungai. Penelitian ini memiliki tujuan untuk menganalisis status mutu air dan mengidentifikasi sumber pencemar di Sungai Kuning. Parameter yang digunakan dalam penelitian ini mencakup 6 parameter yakni *Total Suspended Solid* (TSS), pH, *Dissolved Oxygen* (DO), *Biochemical Oxygen Demand* (BOD), *Chemical Oxygen Demand* (COD), dan Amonia Nitrogen (NH3-N). Data berasal dari data sekunder dengan 4 titik sampel. Metode penentuan status mutu air dengan menggunakan klasifikasi oleh DOE-WQI (*Department of Environment Water Quality Index)*. Metode tersebut merupakan metode penentuan kelas air dari Malaysia dengan mempertimbangkan baku mutu air kelas 2 oleh Peraturan Gubernur DIY No 20 Tahun 2008. Hasil analisis dilakukan dengan analisis deskriptif dan analisis komparatif. Hasil penelitian ini menunjukkan Sungai Kuning memiliki status mutu air yang masih baik (*clean*). Namun, terdapat parameter pada bulan tertentu yang memiliki nilai diatas baku mutu kelas 2 yakni parameter DO. Nilai kualitas air Sungai Kuning fluktuatif yakni pada titik 1 sebesar 94, titik 2 sebesar 96, titik 3 sebesar 94, sedangkan titik 4 sebesar 93. Hasil pengamatan di lapangan menunjukkan sumber pencemar dan aktivitas di Sungai Kuning berupa kegiatan pertanian, perikanan, peternakan, permukiman, dan sektor usaha.

Kata Kunci: Kualitas Air, Status Mutu Air, DOE-WQI, Sungai Kuning

ANALYSIS OF THE KUNING RIVER'S WATER QUALITY STATUS AND POLLUTION SOURCES IN SLEMAN REGENCY

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ABSTRACT

Water quality status is the level of water conditions that indicates polluted conditions or good conditions at a certain time based on a comparison with the established water quality standards. By comparing the water quality data to the quality standard for the water designation class, the state of the water quality can be determined. This study was carried out in Sungai Kuning, Sleman Regency, DIY. The consumption needs of the residents of Sleman Regency are significantly influenced by the Kuning River. The predominant land use for agriculture and habitation is the source of the issues in the Kuning River. Rivers get agricultural waste that is used for pest control and fertilizer. The purpose of this study is to evaluate the Kuning River's water quality status and pinpoint any causes of pollution. Total Suspended Solid (TSS), pH, Dissolved Oxygen (DO), Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and Ammonia Nitrogen (NH3-N) were the six parameters employed in this study. Four sample points from secondary sources were used to generate the data. The procedure for assessing water quality status using DOE-WQI categorization (*Department of Environment Water Quality Index*). The class 2 water quality requirements established by the Governor of DIY Regulation No. 20 of 2008 are taken into account in this technique to assess Malaysian water quality. Descriptive analysis and comparison analysis used to determine the analysis findings. According to the study's findings, the Kuning River's water quality is clean. DO parameter is one of the parameters with values that are occasionally higher than the class 2 quality requirement. The Kuning River's water quality rating ranges from 94 to 96 to 94 to 93 depending on the area; for example, location 1 is 94, position 2 is 96, location 3 is 94, and location 4 is 93. Kuning River's sources of pollutants and activities, according to field observations, are settlements, the business sector, fisheries, agriculture, and livestock.

Keywords: Water Quality, Water Quality Status, DOE-WQI, Kuning River