KAJIAN KERUSAKAN LINGKUNGAN PERAIRAN AIRTANAH AKIBAT PEMBUANGAN LIMBAH INDUSTRI ELEKTROPLATING (PENYEPUHAN LOGAM PERAK)
KASUS DI KOTAGEDE, DAERAH ISTIMEWA YOGYAKARTA

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INTISARI

Degradasi lingkungan perairan airtanah makin banyak terjadi di berbagai daerah. Salah satu penyebabnya ialah pembuangan limbah kimia berbahaya sisa industri ke lingkungan tanpa dilakukan pengolahan terlebih dahulu. Kotagede merupakan salah satu sentra industri elektroplating (penyepuhan logam) atau kerajinan logam yang sangat terkenal di Indonesia, dimana industri tersebut menghasilkan limbah logam berat. Penelitian ini bertujuan untuk mengetahui jenis dan tingkat kerusakan lingkungan perairan airtanah akibat pembuangan limbah industri elektroplating, serta merumuskan strategi pengelolaan lingkungan untuk menjaga kelestarian fungsi airtanah di wilayah Kotagede dan sekitarnya.

Penelitian ini menggunakan metode survei sebagai alat pengumpulan data yang dianalisis secara kualitatif dan kuantitatif. Data yang digunakan adalah data primer (kualitas airtanah, kesehatan makhluk hidup, serta data sosial) yang didukung oleh data sekunder (peta RBI, peta administrasi, peta titik kerajinan di daerah penelitian dan beberapa peta lainnya). Aspek abiotik ditinjau dari uji kualitas airtanah, aspek biotik dari kesehatan makhluk hidup berdasarkan wawancara dari kesaksian warga, dan aspek kultural ditinjau menggunakan metode *in-depth interview*. Identifikasi jenis kerusakan lingkungan dilakukan melalui observasi ketiga komponen lingkungan. Analisis tingkat kerusakan lingkungan perairan airtanah dilakukan menggunakan metode Indeks Pencemaran. Analisis persepsi masyarakat dilakukan secara kualitatif. Kombinasi seluruh hasil analisis digunakan untuk merumuskan strategi pengelolaan lingkungan.

Hasil analisis status perairan airtanah di wilayah Kotagede dan sekitarnya tergolong cemar ringan dengan nilai Indeks Pencemaran tertinggi sebesar 2,60 dan status air limbah tergolong cemar berat dengan nilai Indeks Pencemaran tertinggi sebesar 14,34. Analisis persepsi masyarakat menunjukkan bahwa kebanyakan dari mereka masih belum menganggap serius adanya penurunan kualitas airtanah, namun ada beberapa warga yang mencoba menindaklanjuti dengan melaporkan kepada DLH setempat. Strategi dan kebijakan yang dibutuhkan untuk pengelolaan lingkungan antara lain pembuatan IPAL komunal khusus untuk limbah industri kerajinan logam, sosialisasi pengolahan limbah untuk para pelaku industri, sosialisasi kesadaran tentang pentingnya lingkungan airtanah untuk seluruh warga masyarakat, serta adanya pengawasan, kerjasama antara pemerintah, masyarakat, dan pelaku industri sendiri untuk melestarikan lingkungan perairan airtanah di wilayah Kotagede dan sekitarnya.

Kata Kunci: *kualitas airtanah, kerusakan lingkungan, industri elektroplating, kerajinan logam, Kotagede*

STUDY OF ENVIRONMENTAL DAMAGE OF GROUNDWATER DUE TO ELECTROPLATING INDUSTRIAL WASTE DISPOSAL (SILVER METAL COATING)

CASE IN KOTAGEDE, PROVINCE OF YOGYAKARTA

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ABSTRACT

Environmental degradation of groundwater was increased day by day in many regions. One of the reasons was that the hazardous chemical waste from the industry which was disposed into the environment without any prior process. Kotagede was the one of the most famous electroplating industry in Indonesia, whereas the industry produced heavy metal waste. This study aims to determine the type and level of damage of groundwater aquatic environment due to the disposal of electroplating industrial waste, and also formulate the environmental management strategies to maintain the sustainability of groundwater functions in Kotagede and its surroundings.

This study used the survey method as a data collection tool that was analyzed qualitatively and quantitatively. It used primary data (groundwater quality, the health of living things, and social data) supported by secondary data (RBI maps, administrative maps, industry point maps in the study area, and other maps). Abiotic aspects were reviewed from groundwater quality tests, biotic aspects were reviewed from health of living things based on interviews from community testimonies, and cultural aspects were reviewed using in-depth interview methods. Identification of the types of environmental damage was done by observing all three environmental components. The level damage analysis of the groundwater environment was carried out using the Pollution Index method. Analysis of community perceptions was carried out qualitatively. The combination of results of the analysis was used to formulate an environmental management strategy.

The groundwater status from the analysis results was classified as mild pollutants with the highest Pollution Index value of 2,60 and the status of wastewater classified as heavy polluted with the highest Pollution Index value of 14,34. Analysis of community perceptions showed that most of them still did not take seriously related to the decline of groundwater quality, but there were some people aware and tried to follow up the government (local DLH). The strategies and policies are needed for environmental management include making Wastewater Treatment Plants (WWTP) specifically for metal craft industry, socialization of wastewater treatment management for industrial entrepreneurs, raising awareness of the importance of groundwater environment for all citizens, and also there is supervision, cooperation between government, the community, and also industrial entrepreneurs to preserve the groundwater in Kotagede.