

KAJIAN KERUSAKAN LINGKUNGAN PERAIRAN SUNGAI AKIBAT AKTIVITAS PERTANIAN INTENSIF DI DAS TAMBAKBAYAN KABUPATEN SLEMAN YOGYAKARTA

ABSTRAK

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Penelitian ini dilakukan di DAS Tambakbayan yang berlokasi di Kabupaten Sleman, tepatnya di Kecamatan Pakem, Ngaglik, Ngemplak, dan Depok. Penelitian ini bertujuan untuk mengkaji jenis kerusakan lingkungan, menentukan tingkat kerusakan lingkungan, dan merumuskan strategi serta kebijakan pengelolaan lingkungan DAS Tambakbayan karena adanya aktivitas pertanian intensif.

Metode penelitian yang digunakan adalah metode survei dan sampel diambil dengan metode *purposive sampling* di bagian hulu, tengah, dan hilir sesuai dengan jenis penggunaan lahan pertanian. Parameter yang digunakan meliputi komponen abiotik (warna, bau, pH, suhu, TDS, EC, BOD, COD, Amonia (NH_3), Nitrat (NO_3^-), Nitrit (NO_2^-), dan Fosfat (PO_4^{2-})); komponen biotik (*fitoplankton*, dan *zooplankton*); dan komponen kultural (pengetahuan, persepsi, perilaku, dan kepedulian petani).

Hasil penelitian menunjukkan adanya pencemaran atau kerusakan lingkungan yang ditinjau dari komponen abiotik, biotik, dan kultural. Hal ini tidak sesuai dengan status DAS Tambakbayan (hulu hingga Dusun Santan, Maguwo) sebagai sungai kelas I, yang seharusnya tidak terdapat pencemaran. Indeks cemar menunjukkan tingkat cemar ringan, dengan kondisi perairan eutrofik. Kondisi ini tentunya disebabkan oleh komponen kultural yang memiliki pengetahuan, persepsi, perilaku, dan kepedulian yang rendah terhadap kelestarian sungai. Adanya pemberian informasi, dan pembimbingan terhadap komponen kultural mampu meningkatkan pengetahuan tentang pengolahan lahan dan pencemaran sungai sehingga akan memperbaiki persepsi, perilaku, dan meningkatkan kepedulian terhadap kelestarian sungai.

Kata kunci: *kerusakan lingkungan, pertanian intensif, indeks cemar, status trofik, kualitas air, DAS Tambakbayan*

THE STUDY OF RIVER ENVIRONMENTAL DAMAGE BECAUSE OF INTENSIVE AGRICULTURE AT TAMBAKBAYAN WATERSHED, SLEMAN DISTRICT, YOGYAKARTA

ABSTRACT

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The research was conducted at Tambakbayan watershed in Sleman District, especially in Pakem, Ngaglik, Ngemplak, and Depok Sub-District. The aim was to study about environmental damage type, to decide environmental damage level, and to formulate the environmental management strategy and policy for Tambakbayan watershed because of intensive agriculture activity.

The method was survey method and samples were taken by purposive sampling method at upstream, middle, and downstream as the type of agriculture land. The parameters which used in this research were abiotic component (colors, smells, pH, temperatures, TDS, EC, BOD, COD, Ammonia (NH₃), Nitrate (NO₃⁻), Nitrite (NO₂⁻), and Phosphate (PO₄²⁻)); biotic component (fitoplankton, and zooplankton); and cultural component (knowledge, perception, behavior, and farmer's caring).

The result was proved that there was a contamination or environmental damage which reviewed from abiotic, biotic, and cultural components. It was not accordance with Tambakbayan Watershed (upstream to Santan Village, Maguwo) as class I river, which should not have any contamination. A pollutant index indicated lightly polluted, with eutrophic water status. This condition was certainly caused by cultural components that had a low knowledge, perception, behavior, caring for the sustainability of river. The existence of information, and the supervision of cultural components is able to improve knowledge about land cultivation and river pollution will improve perception, behavior, and increase awareness of the sustainability of the river.

Keywords: *environmental damage, intensive agriculture, pollutant index, trophic status, water quality, Tambakbayan watershed.*