

KAJIAN KERUSAKAN LINGKUNGAN PERAIRAN SUNGAI AKIBAT AKTIVITAS PERTANIAN INTENSIF DI DAS MERAWU KABUPATEN BANJARNEGARA JAWA TENGAH

INTISARI

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Pemanfaatan berlebihan terhadap sumberdaya alam tanpa memperhatikan daya dukung dan daya tampung telah menyebabkan penurunan fungsi dan kerusakan lingkungan. Meningkatnya kejadian bencana hidrometeorologis seperti longsor, banjir, dan kekeringan menjadi bukti menurunnya keseimbangan lingkungan. Pencemaran perairan juga berdampak pada penurunan sistem penyangga kehidupan dan kerusakan lingkungan. Penelitian tentang kerusakan lingkungan perairan menjadi penting untuk dilakukan sebagai dasar penyusunan strategi pengelolaan lingkungan hidup.

Penelitian dilakukan di Daerah Aliran Sungai (DAS) Merawu yang merupakan bagian hulu dari DAS Serayu, berlokasi di Kabupaten Banjarnegara, Jawa Tengah. Penelitian fokus pada 7 tipe penggunaan lahan dominan dalam DAS Merawu. Penelitian ini bertujuan untuk mengetahui kerusakan lingkungan yang terjadi akibat pertanian intensif, mengetahui tingkat kerusakan abiotik, biotik dan kultural, serta strategi dan kebijakan pengelolaan lingkungan di DAS Merawu. Metode penelitian yang digunakan adalah metode survei lapangan. Data primer diperoleh menggunakan survei sampel, pengukuran langsung di lapangan, uji laboratorium, kuisioner, wawancara serta dokumentasi. Data sekunder diperoleh dari lembaga terkait dan studi pustaka. Hasil tabulasi data kemudian dilakukan analisis deskriptif untuk menjawab tujuan penelitian.

Hasil penelitian menunjukkan bahwa telah terjadi pencemaran ringan pada kualitas air di DAS Merawu dengan indeks pencemaran tertinggi pada lingkungan pertanian intensif. Secara biotik masih terdapat vegetasi dan biota yang cukup baik di DAS Merawu, kecuali pada lingkungan pertanian intensif di hulu tutupan bervegetasi yang rendah dan potensi erosi tinggi. Secara kultural, perilaku masyarakat dari aspek pengetahuan, sikap, kelembagaan dan kearifan lokal sudah cukup baik, namun perubahan perilaku peduli lingkungan tidak dapat langsung terjadi. Dibutuhkan tahapan proses mulai dari tahu, mau dan mampu untuk menjaga kelestarian lingkungan. Kebijakan dan peraturan pemulihan DAS berdasarkan fungsinya, edukasi masyarakat tentang peran DAS sebagai sistem penyangga kehidupan menjadi strategi kebutuhan masa depan.

Kata kunci: kerusakan lingkungan, daerah aliran sungai, pertanian intensif, pemulihan DAS, edukasi masyarakat



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STUDY OF RIVER ENVIRONMENT DAMAGE CAUSED BY INTENSIVE AGRICULTURE IN THE MERAWU WATERSHED, BANJARNEGARA DISTRICT, CENTRAL JAVA

ABSTRACT

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Excessive use of natural resources without regard to carrying capacity has caused a decrease in function and environmental damage. The increasing occurrence of hydrometeorological disasters such as landslides, floods, and droughts are evidence of a declining ecological balance. Water pollution also has an impact on decreasing life support systems and environmental damage. Research on the damage to the aquatic environment is essential as a basis for the preparation of environmental management strategies.

The study conducted in the Merawu River Basin, which is part of the upstream Serayu River Basin, located in Banjarnegara District, Central Java. The study focused on seven types of dominant land use in the Merawu watershed. This study aims to determine the environmental damage caused by intensive agriculture, determine the level of abiotic, biotic, and cultural damage, as well as environmental management strategies and policies in the Merawu watershed. The research method used is the field survey method. Primary data obtained using sample surveys, direct measurements in the field, laboratory tests, questionnaires, interviews, and documentation. Secondary data obtained from related institutions and literature studies. The results of the data tabulation then performed a descriptive analysis to answer the research objectives.

The results showed that there had been little pollution in the water quality in the Merawu watershed with the highest pollution index in the intensive farming environment. Biologically there is still good vegetation and biota in the Merawu watershed, except in the intensive agricultural environment in the upstream vegetation cover, which is low and has high erosion potential. Culturally, people's behavior from the aspects of knowledge, attitudes, institutions, and local wisdom is good enough, but changes in environmental care behavior cannot immediately occur. It takes the stages of the process, starting from understanding, willing, and be able to preserve the environment. Policies and regulations for watershed recovery based on their functions, public education about the role of watersheds as a life support system is a strategy for future needs.

Keywords: environmental damage, watersheds, intensive agriculture, watershed recovery, community education