

Impervious cover and stream quality prediction based impervious cover model and water quality index at Ciliwung, Citarum, Citanduy, Cimanuk River, West Java = Daerah kedap air dan prediksi kualitas air sungai-sungai besar di Jawa Barat berdasarkan impervious cover model dan water quality index di Ciliwung, Citarum, Citanduy, Sungai Cimanuk, Jawa Barat

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Abstrak

Meningkatnya jumlah penduduk di kawasan DAS Ciliwung, Citarum, Citanduy, dan Cimanuk menyebabkan berkembang pesatnya konstruksi. Permintaan yg signifikan akan jalan sebagai transportasi serta bangunan dan perumahan untuk tempat tinggal sehingga daerah kedap airnya pun meningkat. Model Impervious Cover, diusulkan oleh Schueler 2003, mengkorelasi persen kedap air pada subDAS dan kualitas air sungai serta memberikan pengukuran prediksi terhadap indikator air sungai ke dalam kategori kategori lalu mendefinisikan tingkat keparahan dan kemungkinannya untuk pulih.

National Sanitation Foundation Water Quality Index NSFQWI adalah salah satu alat analitis yang umum digunakan untuk meringkas data kualitas air yang mana mengubah konsentrasi sembilan parameter ke satu dari 5 Water Quality Rating WQR. Tujuan kajian ini adalah untuk menguji penerapan dan kesesuaian pendekatan ICM dan NSFQWI dalam memprediksi kualitas air sungai Ciliwung, Citarum, Citanduy, dan Cimanuk, Jawa Barat, Indonesia.

The increasing of population at Ciliwung, Citarum, Citanduy, and Cimanuk watersheds leads a rapid development especially in construction fields. There is significant demand to build roads for transportation as well as buildings and houses for settlement, thus, escalate the impervious area. The impervious cover model ICM, proposed by Schueler 2003, brings off correlation between the percentage of subwatershed imperviousness and stream quality as well as outlines specific quantitative or narrative prediction for stream indicators within each stream category to define the severity of current stream and the prospects for their future restoration.

The National Sanitation Foundation Water Quality Index NSFQWI is one of analytical tools that commonly used to summarize water quality data, which converts the concentration data for nine water quality parameters into one of five Water Quality Rating WQR. The study is aimed to test the applicability and conformity of both ICM and NSFQWI approaches for predicting stream quality of Ciliwung, Citarum, Citanduy, and Cimanuk river, West Java, Indonesia.