# Kajian Laju Infiltrasi Berdasarkan Tekstur Tanah di Sungai Citarum, Kecamatan Bojongsoang dan Sekitarnya, Kabupaten Bandung = Study of Infiltration Rate Based on Soil Texture in Citarum River, Bojongsoang District and Surrounding Areas, Bandung Regency

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Abstrak

Infiltrasi sebagai salah satu proses dari siklus hidrologi yang mempunyai manfaat bagi manusia dan lingkungan. Morfologi Sungai Citarum, Kecamatan Bojongsoang dan sekitarnya telah mengalami perubahan dan alih fungsi lahan terutama di bagian danau oxbow. Alih fungsi lahan tersebut dapat mengurangi kemampuan tanah untuk menyerap air sehingga laju infiltrasi menjadi buruk. Tekstur tanah merupakan salah satu aspek dalam menentukan jenis tanah yang berkembang sehingga dapat mempengaruhi kondisi laju infiltrasi di suatu daerah. Penelitian ini bertujuan untuk menentukan laju infiltrasi, mengetahui tekstur tanah, dan hubungan laju infiltrasi dan tekstur tanah di daerah penelitian. Laju infiltrasi ditentukan dengan pengukuran di lapangan menggunakan double ring infiltrometer dan perhitungan metode Horton, dan distribusi tekstur tanah diperoleh dari analisa ayakan. Laju infiltrasi terbesar memiliki nilai laju infiltrasi konstan 1200 mm/jam, sedangkan terkecil 30 mm/jam sehingga laju infiltrasi yang ditermukan terkategori sangat cepat, cepat, dan sedang. Daerah penelitian mempunyai tekstur tanah dan jenis tanah yang sama berupa pasir bergradasi buruk dan gleisol. Hubungan laju infiltrasi dan tekstur tanah didapatkan melalui uji korelasi regresi, dan hasil kedua aspek divisualisasikan melalui peta peringkat laju infiltrasi terhadap jenis tanah.

.....Infiltration as a hydrological cycle process that has benefits for humans and the environment. The morphology of the Citarum River, Bojongsoang District and its surroundings has undergone changes and changes in land use, especially in the oxbow lake section. Land conversion can reduce the ability of the soil to absorb water so that the infiltration rate becomes poor. Soil texture is one aspect in determining the type of soil that develops so that it can affect the condition of the infiltration rate in an area. This study aims to determine the rate of infiltration, determine soil texture, and the relationship between infiltration rate and soil texture in the study area. The infiltration rate was determined by field measurements using a double ring infiltrometer and Horton's method calculations, as well as the distribution of soil texture obtained from sieve analysis. The largest infiltration rate has a constant infiltration rate of 1200 mm/hour, while the smallest is 30 mm/hour so that the infiltration rates found are classified as very fast, fast, and moderate. The research area has the same texture and soil type in the form of poorly graded sand and gleisols. The relationship between infiltration rate and soil texture was obtained through a regression correlation test, and the results of these two aspects were visualized through a ranking map of the infiltration rate of soil types.