

INFILTRASI PADA BERBAGAI TUTUPAN LAHAN DAS TABUNIO DAN MALUKA PROVINSI KALIMANTAN SELATAN

The Infiltration on Various Land Covers to Formulate and Evaluate the Environmental Vulnerability of the Tabunio and Maluka Watershed South Kalimantan Province

Syarifuddin Kadir, Ichsan Ridwan, Nurlina, Hanif Faisol, Badaruddin, Nur Syifa Yarnie dan Yesi Eka Pratiwi

Universitas Lambung Mangkurat

ABSTRACT: Land cover can affect the physical properties of the soil related to the rate, capacity and volume of infiltration in a land. The purpose of this study was to determine the rate of infiltration and to analyze the volume and capacity of infiltration in various land covers to formulate and evaluate environmental vulnerability in the Tabunio and Maluka watersheds. The research activities were carried out in the Amparo Kecil watershed, the Tabunio watershed and the Bati Bati watershed, the Maluka watershed, South Kalimantan province. The main equipment used in this research are double ring infiltrometer, GPS (Global Positioning System), GIS (Geographic Information System) application to determine capacity and infiltration volume of each land unit. In the small Amparo watershed Tabunio watershed, it can be seen that environmental vulnerability is: a) The highest infiltration capacity was found in young secondary forest land, namely 334.92 mm/hour and the highest infiltration volume was found in old secondary forest land cover, namely 307.37 mm³, while the capacity and the lowest infiltration volume was found in shrub land cover, namely 49.12 mm/hour and 27.85 mm³. b) Environmental vulnerability to shrub land cover with an infiltration rate of 28.33 mm/hour, a capacity of 49.12 mm/hour and an infiltration volume of 27.85 mm³. Keywords: Infiltration, Land Cover and Watershed

ABSTRAK. Tutupan lahan dapat mempengaruhi sifat fisik tanah yang berhubungan dengan laju, kapasitas dan volume infiltrasi pada suatu lahan. Tujuan dari penelitian ini ialah untuk mengetahui laju infiltrasi serta menganalisis besar volume dan kapasitas infiltrasi pada berbagai tutupan lahan untuk merumuskan dan mengevaluasi kerentanan lingkungan di DAS Tabunio dan DAS Maluka. Kegiatan penelitian dilaksanakan di Sub DAS Amparo Kecil DAS Tabunio dan Sub DAS Bati Bati DAS Maluka Provinsi Kalimantan Selatan. Peralatan utama yang digunakan dalam metode penelitian ini adalah double ring infiltrometer, GPS (Global Positioning System), aplikasi GIS (Geographic Information System) untuk mengetahui kapasitas dan volume infiltrasi masing masing unit lahan. Sub DAS Amparo Kecil DAS Tabunio terlihat bahwa kerentanan lingkungan yaitu: a) Kapasitas infiltrasi tertinggi terdapat pada lahan hutan sekunder muda yaitu 334,92 mm/jam dan volume infiltrasi tertinggi terdapat pada tutupan lahan hutan sekunder tua yaitu 307,37 mm³, sedangkan kapasitas dan volume infiltrasi terendah terdapat pada tutupan lahan semak belukar yaitu 49,12 mm/jam dan 27,85 mm³. b) Kerentanan lingkungan pada tutupan lahan semak belukar dengan laju infiltrasi 28,33 mm/jam, kapasitas 49,12 mm/jam dan volume infiltrasi 27,85 mm³

Kata Kunci: Infiltrasi, Tutupan Lahan dan DAS

Penulis untuk korespondensi, surel: syarifuddin.kadir@ulm.ac.id