

**PREDIKSI SEDIMENTASI PADA SUB DAS TAPAKIS DENGAN
MODEL *MODIFIED UNIVERSAL SOIL
LOSS EQUATION***



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Abstrak

Sedimentasi merupakan salah satu penyebab degradasi lahan. Dampak dari sedimentasi mengakibatkan meningkatnya aliran permukaan, menurunnya permukaan air tanah, meluasnya lahan ke air dan terganggunya aliran sungai. Tujuan dari penelitian ini ialah untuk memprediksi laju sedimentasi yang terjadi dengan menggunakan model prediksi erosi MUSLE di Sub DAS Tapakis, Kabupaten Padang Pariaman. Penelitian dilakukan dengan metode survey, sampel tanah diambil secara *purposive sampling* berdasarkan satuan lahan. Ada 7 satuan lahan (Sw.1.Ent; Sw.2.Ent; Sw.3.Ent; Kb.1.Ent; Kb.2.Ent; Sk.1Ent; Ld.1.Ent), dengan tiga kali ulangan masing-masingnya, sehingga totalnya diperoleh 21 titik. Parameter yang dianalisis yaitu tekstur, berat volume, bahan organik, permeabilitas dan struktur tanah. Dari hasil penelitian diperoleh bahwa, besarnya sedimentasi pada berbagai satuan lahan di Sub DAS Tapakis beragam. Satuan lahan dengan laju sedimentasi terendah (0,22 ton/ha/thn) terdapat pada satuan lahan semak dengan kemiringan 0 – 8 % (Sk.1.Ent). Satuan lahan dengan laju sedimentasi tertinggi (156,96 ton/ha/thn) yaitu pada satuan lahan kebun dengan lereng 8 – 15 % (Kb.2.Ent). Jumlah total laju sedimentasi pada lahan seluas 1 ha setiap tahunnya pada Sub DAS Tapakis yaitu 356,92 Ton.

Kata Kunci : Sedimentasi, Sub DAS Tapakis, MUSLE, sifat fisika tanah



PREDICTING SEDIMENTATION IN THE SUB WATERSHED OF TAPAKIS USING THE MODIFIED UNIVERSAL SOIL LOSS EQUATION MODEL

Abstract

Sedimentation is one factor causing land degradation. The impact of sedimentation will increase surface flow and impermeable land, decrease groundwater levels, as well as disrupt the river flow. The purpose of this research was to predict the rate of sedimentation using the MUSLE (an Erosion Prediction Model) in the Sub Watershed of Tapakis, Padang Pariaman Regency. The research was conducted using survey method, the soil was sampled by purposive sampling based on land units, there were 21 sample points from 7 land units (Sw.1.Ent; Sw.2.Ent; Sw.3.Ent; Kb.1.Ent; Kb.2.Ent; Sk.1Ent; Ld.1.Ent). The parameters analyzed were soil texture, bulk density, organic matter, permeability and structure type. From the results of the study, it was found that the rate of sedimentation varied among the land units in the sub watershed. The land unit having the lowest rate of sedimentation (0.22 tons/ha/y) was found in the bush land unit with a slope of 0 - 8% (Sk.1.Ent). The land unit having the highest rate of sedimentation (156.96 tons/ha/y) was in the plantation land unit with a slope of 8 - 15% (Kb.2.Ent). The total amount of sedimentation received in a ha area each year in the Sub watershed of Tapakis was 356.92 tons.

Keywords: sedimentation, sub watershed Tapakis, MUSLE, soil physical properties

