

KARAKTERISTIK SUSPENSI PADA DAERAH TANGKAPAN AIR LAHAN PERTANIAN DAN HUTAN PINUS DI DESA PENANGGUNGAN BANJARNEGARA

INTISARI

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Desa Penanggungan II merupakan *recharge area* dimana memiliki pertanian intensif sayuran. Perubahan kawasan menjadi kawasan pertanian intensif berakibat pada tingginya erosi dan sedimentasi yang berimbas pada kerusakan Daerah Aliran Sungai berupa pendangkalan. Di Desa Penanggungan II terdapat penggunaan lahan yang berbeda berupa Hutan Pinus. Perbedaan penggunaan lahan diduga berpengaruh pada karakteristik suspensi, sehingga perlu dilakukan penelitian untuk mengetahui karakteristik suspensi berupa debit suspensi puncak dan suspensi total serta mengetahui hubungan karakteristik hujan berupa tebal hujan terhadap debit suspensi puncak dan suspensi total.

Hasil penelitian karakteristik suspensi pada kedua Daerah Tangkapan Air (DTA) didapatkan nilai rerata debit suspensi puncak DTA Pertanian sebesar 0,102 kg/det sedangkan DTA Hutan Pinus sebesar 0,0008 kg/det. Nilai rerata suspensi total DTA Pertanian sebesar 669,29 kg sedangkan DTA Hutan Pinus sebesar 3,71 kg. Analisis regresi non-linier tebal hujan dengan debit suspensi puncak DTA Pertanian didapatkan nilai $R^2=0,858$ artinya pengaruh tebal hujan terhadap debit suspensi puncak sebesar 85,8%, sedangkan DTA Hutan Pinus didapatkan nilai $R^2=0,616$ artinya pengaruhnya hanya 61,6%. Analisis regresi non-linier tebal hujan dengan suspensi DTA Pertanian didapatkan nilai $R^2=0,779$ artinya pengaruh tebal hujan terhadap suspensi sebesar 77,9%, sedangkan DTA Hutan Pinus didapatkan nilai $R^2=0,727$ artinya pengaruhnya sebesar 72,7%.

Kata Kunci : Daerah Tangkapan Air (DTA), Pertanian, Hutan, Debit Suspensi Puncak, Suspensi

SUSPENDED SEDIMENT CHARACTERISTICS OF AGRICULTURAL AND FOREST PINE CATCHMENT AREA AT PENANGGUNGAN II VILLAGE BANJARNEGARA

ABSTRACT

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Penanggungan village II is recharge area who having intensive agriculture land . Land conversion to intensive agricultural land results is high erosion and sedimentation which will impact on silting in watershed. Penanggungan Village have different land uses, Pine Forest catchment area dominated by *Pinus merkusii*. Differences in land use affect the characteristics of the suspended sediment, so its need do research to determine suspended sediment characteristics (suspended sediment discharge peak and suspended sediment total) and to know correlation between rain characteristics (rain thickness) with suspended sediment discharge peak and suspended sediment total.

Result on suspended sediment characteristics in suspended sediment discharge peak Agriculture catchment area is 0.102 kg / sec and suspended sediment discharge peak Pine Forest catchment area is 0.0008 kg / sec. Average suspended sediment total in Agricultural catchment area is 669,29 kg and Pine Forest catchment area is 3,71 kg. Non-linear regression analysis of rain thickness with suspended sediment discharge peak in agricultural catchment area, value of $R^2 = 0.858$ means the effect of rain thickness on suspended sediment discharge peak is 85.8%, while pine forest catchment value obtained $R^2 = 0.616$ means only 61.6%. The non-linear regression analysis of rain thickness with suspended sediment total of Agricultural catchment area obtained $R^2 = 0.779$, which means the effect of rain thickness on suspended sediment total is 77.9%, while Pine Forest catchment area obtained value of $R^2 = 0.727$ means only 72.7%.

Keywords : Catchment area, Agriculture, Forest, Suspended sediment discharge, Suspended sediment