

MUATAN SUSPENSI di HUTAN JATI  
dan HUTAN PINUS RPH KALIRAJUT, BKPH KEBASEN,  
KPH BANYUMAS TIMUR, JAWA TENGAH  
(Studi Kasus Sub DAS Kaliwangi dan Sub DAS Kaligung)

ABSTRAK

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Pengelolaan hutan tanaman mempunyai tujuan utama untuk pemenuhan kebutuhan bahan baku industri perkayuan, di sisi lain kehadiran suatu hutan dapat memberikan fungsi yang penting bagi perlindungan ruang hidup manusia. Berkaitan dengan hal di atas maka pengkonversian jenis tanaman akan memberikan pengaruh terhadap sistem tata air suatu DAS. Penelitian ini dilaksanakan dengan tujuan untuk mengetahui pengaruh berbagai penutupan vegetasi terhadap angka muatan suspensi suatu DAS dengan tetap memper-timbangkan karakteristik hujan sebagai salah satu faktor penyebab erosi.

Penelitian ini dilakukan dengan pengukuran ketiga karakteristik hujan yaitu: lama hujan (jam), tebal hujan (mm), intensitas hujan maksimum 30 menit (mm/jam) dan debit suspensi (gr/detik) dengan menggunakan alat penatat eurah hujan dan tinggi muka air otomatis. Data muatan suspensi diperoleh melalui pengambilan contoh air pada setiap perubahan tinggi muka air. Angka muatan suspensi dinyatakan dalam ton/Ha/hari. Hasil penelitian selanjutnya dianalisis dengan menggunakan analisis statistik regresi linier berganda dan uji beda rata-rata dua set sampel.

Dari penelitian ini dapat ditarik kesimpulan bahwa terdapat perbedaan angka muatan suspensi di hutan pinus dan hutan jati sebesar 0,0059 ton/Ha/hari pada taraf kepercayaan 95%. Selain hal tersebut di atas juga diketahui bahwa tidak semua karakteristik hujan yang diukur berpengaruh terhadap angka muatan suspensi, dalam hal ini faktor tebal hujan berpengaruh terhadap angka muatan suspensi dengan sifat korelasi positif.

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SUSPENDED LOAD IN TEAK FOREST AND PINE FOREST  
RPH KALIRAJUT, BKPH KEBASEN,  
KPH EAST BANYUMAS, CENTRAL JAVA

ABSTRACT

The main purpose of plantation forest management is, on one hand, to supply the basic materials for industrial field, but on the other hand the existence of forest may serve the crucial function with regard to the function of protecting the environment. The hydrologic cycle of watershed can be influent by a conversion of plants as one of the ecosystem components. The objective of this research is to find out the influence and relationship between vegetation cover and rainfall characteristics to the suspended load.

This research was held by measuring the three rainfall characteristics including duration of rain (hours), total of rain (mm) and maximum intensity in 30 minutes (mm/hours). These rainfall characteristics were measured and recording by ARR (Automatic Raingage Recorder). Data of suspended load were obtained by taking sediment samples soluted in the water during the change of water table. Of the result of analysis of run off and suspended load discharges, the equations of suspended rating curve were obtained. The equation of the suspended rating curve in Sub watershed Kaliwangi is  $Q_s = 0,1613 Q^{1,5626}$  and the equation of suspended rating curve in Sub watershed Kaligung is  $Q_s = 0,3986 Q^{1,2504}$ . The suspended load were counted in ton/ha/day. Statistical analysis was applied in this research, using multiple linear regression and difference between two groups mean test.

Of this research, the conclusions show that :

1. The difference of suspended load between teak forest and pine forest is 0,0059 ton/ha/day at 5% of significant level confidence due to the vegetation cover and characteristics of watershed morphometries.
2. The rainfall characteristic which influent to suspended load is merely total of rain that has positif correlation.

