

**PENGARUH HUJAN TERHADAP *DIRECT RUN OFF*
DAN EROSI DI AREAL TEBANG PILIH TANAM JALUR
(STUDI KASUS DI IUPHHK PT SARI BUMI KUSUMA KALIMANTAN
TENGAH)**

**Hari Murti Setyawan ¹⁾
05748/186554/05/Kt/KSDH**

INTISARI

Hutan memiliki banyak manfaat, salah satu diantaranya adalah produksi kayu. Berbagai dampak lingkungan dapat terjadi dari pemungutan kayu dan pengelolaan pasca tebangan. Terutama untuk permasalahan hidrologi, masukan berupa hujan di areal tebangan pilih tanam jalur dapat meningkatkan debit aliran dan debit suspensi yang berpengaruh terhadap koefisien run off dan laju erosi. Penelitian ini dapat menjadi masukan dalam mengkaji karakter hidrologi di areal pengelolaan Tebang Pilih Tanam Jalur serta menjadi bahan pertimbangan untuk penentuan kebijaksanaan pengelolaan selanjutnya.

Penelitian dilakukan di areal bekas tebangan blok RKT 1999 IUPHHK PT Sari Bumi Kusuma Kalimantan Tengah. Pengambilan data penelitian dilakukan dengan menggunakan alat *currentmeter*, pelampung (untuk memperoleh debit aliran) serta *suspended sampler* (untuk memperoleh debit suspensi). Kemudian dilakukan pemisahan antara volume *direct runoff* dengan volume *based flow* menggunakan *straight line method*. Untuk mengetahui pengaruh hujan terhadap volume *direct runoff* dan erosi yang terjadi, dilakukan analisis regresi sederhana dengan variabel tebal hujan sebagai variabel bebas serta volume *direct run off* dan laju erosi sebagai variabel bergantung.

Hasil penelitian menunjukkan bahwa koefisien *runoff* yang terjadi di blok RKT 1999 tergolong rendah dengan nilai 24.5. Laju erosi yang terjadi 0,657 Ton/Ha/Bulan. Berdasarkan analisis regresi, tebal hujan memiliki pengaruh yang nyata terhadap volume *direct runoff* dan Laju erosi yang ditandai koefisien korelasi 0,819 dan 0,70. Volume *direct runoff* (m^3) yang terjadi di areal bekas tebangan yaitu blok RKT 1999 dapat ditaksir dengan persamaan $DRO = 414,53(P) - 1825,9$ sedangkan Laju Erosi (kg) dapat ditaksir dengan menggunakan persamaan $Laju\ erosi = 1,0964(P) - 16,516$.

Kata Kunci : *Koefisien Run Off*, Hujan, Laju Erosi, Produksi Kayu.

1) Jurusan Konservasi Sumberdaya Hutan Fakultas Kehutanan Universitas Gadjah Mada

***THE RELATIONSHIP OF RAINFALL ON DIRECT RUN OFF VOLUME
AND EROSION IN THE AREA OF SELECTIVE CUTTING AND LINE
PLANTING(STUDY CASE IN IUPHHK PT SARI BUMI KUSUMA
CENTRAL KALIMANTAN)***

**Hari Murti Setyawan ¹⁾
05748/186554/Kt/05/KSDH**

ABSTRACT

Forests have many benefits, one of which is timber production. Environmental impacts can occur from timber harvesting and post harvest management. Especially for hydrological problems, the input of rain in the area of selective cutting and line planting can increase flow rates and suspension discharge affecting coefficient run-off and erosion rate. This research can be an input in assessing the character of the hydrology of the area of Selective Cutting and Line Planting and as a references for formulating policies in the management area.

This research was conducted in 1999 block log over area IUPHHK PT Sari Bumi Kusuma Central Kalimantan. The tools used for this research were the current meter, floating bottle (to acquire debit flow data) and a suspended sampler (to acquire sedimentation flow data). Then the direct runoff volume was separated with the base flow volume using the straight line method. To identify the relationship of precipitation depth with direct runoff volume and erosion depth, the regression analysis was used with precipitation depth as the independent variable, direct run off volume and erosion rate as the dependent variable.

The result of this research showed that the run off coefficient that occurred in the 1999 block log over area classified as low with the value of 24,56 %. Meanwhile the average erosion rate was 0,657 ton/ha/month. Based on the regression analysis, precipitation depth had a profound impact on the direct runoff volume and erosion depth which was signified with the correlation coefficient of 0,819 and 0,70. Direct run off volume that occurred in the 1999 block log over area was estimated with the DRO (mm) equation = $414,53 (P) - 1825,9$ meanwhile the erosion rate could be estimated by using the rate erosion (kg) equation = $1,0964(P) - 16,516$.

Keywords : coefficient run off volume, erosion rate, wood produce

1) Major of Forest Resource Conservation Forestry Faculty Gadjah Mada University