

## **INTERSEPSI TAJUK PADA PENUTUPAN LAHAN TEGALAN DAN KEBUN SALAK DI HULU DAS MERAWU, KABUPATEN BANJARNEGARA**

### **Abstrak**

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DAS Merawu merupakan kawasan yang memiliki tingkat rawan bencana longsor sedang—tinggi. Vegetasi berperan dalam daur hidrologi untuk mengurangi jumlah air hujan yang masuk ke tanah melalui proses intersepsi tajuk. Perbedaan vegetasi pada dua tipe penutupan lahan berupa tegalan dan kebun salak akan berpengaruh terhadap proses intersepsi yang berperan dalam mengurangi risiko bencana longsor, sehingga nilai intersepsi pada kedua penutupan lahan dominan di hulu DAS Merawu perlu diteliti. Penelitian ini bertujuan untuk mengetahui nilai aliran tembus, aliran batang, intersepsi tajuk dan hubungan tebal hujan dengan intersepsi tajuk di penutupan lahan tegalan dan kebun salak milik masyarakat.

Metode pengambilan data di lapangan dilakukan dengan pendekatan keseimbangan volume dimana nilai intersepsi ( $I_c$ ) diperoleh dari pengurangan tebal hujan ( $P$ ) dengan aliran tembus ( $T_f$ ) dan aliran batang ( $S_f$ ). Data tebal hujan diperoleh dari pengukuran ombrometer sedangkan data aliran tembus dan aliran batang dari pengukuran langsung di plot penelitian. Hubungan tebal hujan dengan intersepsi tajuk didapatkan dengan menganalisis kecenderungan data dalam grafik.

Plot 1 (tegalan) didominasi oleh jenis vegetasi sengon (*Falcataria macrophylla*) dan tanaman semusim (cabai dan ketela), sedangkan Plot 2 (kebun salak) didominasi oleh tanaman salak (*Salacca zalacca*), nangka (*Artocarpus heterophyllus*), dan sengon (*F. macrophylla*) sehingga nilai aliran tembus, aliran batang dan intersepsi tajuk di kedua plot berbeda. Nilai aliran tembus Plot 1 berkisar 75,74—91,06% dan Plot 2 berkisar 27,11—42,64%, nilai aliran batang Plot 1 berkisar antara 0,16—2,54% dan Plot 2 berkisar 0,14—1,29%, dan nilai intersepsi tajuk Plot 1 berkisar 6,40—24,11% dan Plot 2 berkisar 56,49—72,48%. Tebal hujan dengan tebal intersepsi tajuk pada Plot 1 dan Plot 2 memiliki hubungan yang berbanding lurus.

**Kata kunci :** *Intersepsi tajuk, Throughfall, Stemflow, DAS Merawu*

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## CANOPY INTERCEPTION ON MOORLAND AND SNAKE FRUIT GARDEN LAND COVERS IN UPSTREAM MERAWU WATERSHED, BANJARNEGARA DISTRICT

### Abstract

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Merawu watershed is an area with landslide hazard-prone level moderate-high. Vegetation has essential roles in the hydrological cycle to reduce the amount of rainwater that enters the ground through the canopy interception process. The difference in vegetation on the two types of land cover in the form of moorland and snake fruit-garden will affect the interception process that plays a role in reducing the risk of landslides. Therefore we need to know the interception value on the two dominant land covers in upstream Merawu watershed. This research aims to determine the amount of throughfall, stemflow, canopy interception, and the relationship between rain thickness and canopy interception on moorland and snake fruit-garden owned by communities.

Data collection analyzed by volume balance method. The value of interception ( $I_c$ ) obtained from the reduction in rainfall ( $P$ ) with throughfall ( $T_f$ ) and stemflow ( $S_f$ ). Rainfall data obtained from ombrometer measurements, while throughfall and stemflow data measured directly in the research plot. The relationship between rainfall and canopy interception obtained by analyzing data trends in the graph.

Plot 1 (moorland) dominated by sengon (*Falcataria macrophylla*) and seasonal plants (chili and cassava). In contrast, Plot 2 (snake fruit-garden) dominated by snake fruit (*Salacca zalacca*), jackfruit (*Artocarpus heterophyllus*), and sengon (*F. macrophylla*) so that throughfall, stemflow, and canopy interception values in the two plots are different. The throughfall value of Plot 1 ranged from 75.74–91.06%, and Plot 2 ranged from 27.11–42.64%, Plot 1 stemflow value ranged from 0.16–2.54% and Plot 2 ranged from 0.14–1.29%, and the canopy interception value of Plot 1 ranged from 6.40–24.11%, and Plot 2 ranged from 56.49–72.48%. Rain thickness and canopy interception in Plot 1 and Plot 2 has a directly proportional relationship.

**Keywords :** Canopy interception, *Throughfall*, *Stemflow*, *Merawu watershed*

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