

**ESTIMASI BIOMASSA DAN KARBON BATANG, CABANG DAN DAUN
BEBERAPA JENIS POHON HUTAN TROPIKA BASAH
PADA AREAL BEKAS TEBANGAN
DI PT. SARI BUMI KUSUMA, KALIMANTAN TENGAH**

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INTISARI

Hutan memiliki peranan yang sangat besar dalam kaitannya dengan perubahan iklim dan pemanasan global. Hutan memiliki kemampuan untuk menyerap, menyimpan sekaligus menjadi sumber emisi karbon. Tujuan penelitian ini adalah untuk mengetahui: (1) persentase potensi biomassa dan kandungan karbon bagi *above ground* (batang, cabang dan daun) beberapa jenis pohon hutan tropika basah di areal bekas tebangan PT. Sari Bumi Kusuma, Kalimantan Tengah, (2) persamaan allometrik potensi biomassa, kandungan karbon dan serapan gas CO₂, (3) potensi biomassa, kandungan karbon dan serapan gas CO₂ *above ground* beberapa jenis pohon hutan tropika basah di areal bekas tebangan.

Estimasi biomassa dan karbon batang, cabang dan daun beberapa jenis pohon hutan tropika basah dilakukan di PT. Sari Bumi Kusuma, Kalimantan Tengah. Pemilihan pohon sampel dilakukan berdasarkan variasi umur dan diameter setinggi dada. Metode penelitian yang dilakukan terdiri atas pengukuran sampel, penentuan potensi biomassa, kandungan karbon dan serapan gas CO₂, dan taksiran potensi biomassa, kandungan karbon dan serapan gas CO₂ per hektar.

Hasil penelitian ini adalah: (1) persentase potensi biomassa pada organ batang = 67,05%, organ cabang = 23,88%, dan organ daun = 9,07%. Persentase kandungan karbon pada organ batang = 68,23%, organ cabang = 23,08%, dan organ daun = 8,69%. (2) persamaan allometrik untuk hubungan antara diameter (D) dengan potensi biomassa total adalah $B_t = 0,1 (D)^{2,513}$ ($R^2 = 0,994$), hubungan antara diameter (D) dengan kandungan karbon total adalah $C_t = 0,045 (D)^{2,532}$ ($R^2 = 0,993$) dan hubungan antara diameter (D) dengan serapan gas CO₂ adalah $CO_{2t} = 0,162 (D)^{2,536}$ ($R^2 = 0,994$). (3) berdasarkan hasil pendugaan diperoleh potensi biomassa per ha di PT. Sari Bumi Kusuma sebesar $264,40 \pm 29,32$ ton/ha, potensi kandungan karbon sebesar $127,94 \pm 14,03$ ton/ha dan potensi serapan gas CO₂ adalah sebesar $468,41 \pm 52,05$ ton/ha.

Kata Kunci : Hutan Tropika Basah, Biomassa, Karbon, PT. Sari Bumi Kusuma.

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**THE ESTIMATION OF BIOMASS AND CARBON IN STEM, BRANCH
AND LEAF FROM SOME TROPICAL TREES
AT LOGGED AREA
IN PT. SARI BUMI KUSUMA, KALIMANTAN TENGAH**

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ABSTRACT

Forest has big roles in climate change and global warming. Forest has ability to be carbon absorber, carbon storage, and carbon source. The purposes of this study are to know about (1) The percentage of potential biomass and carbon content for above ground (stems, branches, and leaves) of some tropical trees at logged area in PT. Sari Bumi Kusuma, Kalimantan Tengah, (2) Allometric equation of potential biomass, carbon content and CO₂ uptake, (3) potential biomass, carbon content, and CO₂ uptake from some species of tropical trees in the logged area.

Biomass and carbon estimation of stem, branch, and leaf from some species of tropical trees was done in PT. Sari Bumi Kusuma. Sample selection is done based on variation in age and diameter breast height. The method which had been done consist of the measurement of samples, determination of potential biomass, carbon content, and CO₂ uptake, estimates of potential biomass, carbon content and CO₂ uptake.

The results of this study are: (1) percentage of potential biomass of stem = 67.05%, branch = 23.88%, leaf = 9.07%. The percentage of of carbon content of the stem = 68.23%, branch = 23.08% and leaf = 8.69% (2) Allometric equation for the relation between diameter (D) and total potential biomass is $Bt = 0.1 (D)^{2.513}$ ($R^2 = 0.994$), the relation between diameter (D) and total carbon content is $Ct = 0.045 (D)^{2.532}$ ($R^2 = 0.993$) and the relation between diameter (D) and CO₂ uptake is $CO_2t = 0.162 (D)^{2.536}$ ($R^2 = 0.994$). (3) Based on the estimation's result, potential biomass per hectare in PT.Sari Bumi Kusuma is 264.40 ± 29.32 ton/hectares, carbon content potential is 127.94 ± 14.03 ton/hectares and potential CO₂ uptake is $468,41 \pm 52,05$ ton/hectares.

Key words: Tropical Trees, Biomass, Carbon and PT. Sari Bumi Kusuma.

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