

CHORIDINA KARENINGSEKAR NRP 15.03.4.11.00014. Stock carbon in the type of different (*Rhizophora stylosa*, *Avicennia marina* dan *Bruguiera gymnorhiza*) in Tuban Coast. Advisor **Insafitri, ST., M.Sc., P.hD**

ABSTRACT

Mangrove is one of special plant in tropical forest which has ability to flourish in the river area or usually call estuari area. Mangrove has benefit as absorbing carbon dioxide, which is the process of photosynthesis change inorganic carbon (CO_2) into organic carbon in the form of vegetation material. Tuban regency is one of regency which located in East Java which has coastline length around 65 km, and has distribution of mangrove forest 120,40 Ha. The aim of this research to know about amount of uptake absorption carbon dioxide (CO_2) on type of mangrove which different in Tuban. The study was conducted on the coast of Tuban covering mangrove center in Mangrove Center Tuban, Jenu Kabupaten Tuban with use three research points and every point does three times repetitions. This research was conducted on November 2018. Technique of collecting data used destructive method and calculation of data include water content value, ash content, carbon and uptake of carbon dioxide in basic laboratory, faculty of agriculture. Based on the results was obtained mangrove which have amount uptake highest carbon dioxide is mangrove with type *Rhizophora stylosa* with uptake value CO_2 as much as 738,5 gram $\text{CO}_2/1000$ gr tree, and highest uptake available in part of stem as much as 163,62 gram $\text{CO}_2/1000$ gr tree. The value of uptake carbondioxide the highest number two there are the types of *Bruguiera gymnorhiza* as much as 713,65 gram $\text{CO}_2/1000$ gr tree with the highest absorption which found on the leaf as much as 160,18 gram $\text{CO}_2/1000$ grtree and the lowest absorption that is *Avicennia marina* as much as 700,93 gram $\text{CO}_2 / 1000$ gr tree with the highest absorption also found on leaf as much as 147,33 gram $\text{CO}_2/1000$ gr tree.

Keyword: Stock, carbon, Mangrove and Tuban Coast.

CHORIDINA KARENINGSEKAR NRP 15.03.4.1.1.00014. Stok karbon pada jenis mangrove yang berbeda (*Rhizophora stylosa*, *Avicennia marina* dan *Bruguiera gymnorhiza*) di Perairan Tuban.

ABSTRAK

Mangrove merupakan suatu tumbuhan khas pada hutan tropis yang memiliki kemampuan tumbuh subur di daerah muara sungai atau disebut dengan daerah estuari. Mangrove memiliki manfaat sebagai penyerap karbondioksida, dimana proses fotosintesis mengubah karbon anorganik (CO_2) menjadi karbon organik dalam bentuk bahan vegetasi. Kabupaten Tuban salah satu kabupaten yang berada di propinsi Jawa Timur dengan memiliki panjang garis pantai sekitar 65 km, dan memiliki sebaran hutan mangrove 120,40 Ha. Penelitian bertujuan mengetahui jumlah serapan karbondioksida (CO_2) pada jenis mangrove yang berbeda di perairan Tuban. Penelitian dilakukan di pesisir Tuban mencakup kawasan pusat mangrove di Mangrove Center Tuban, Jenu Kabupaten Tuban dengan menggunakan tiga titik penelitian dan masing masing titik dilakukan tiga kali pengulangan. Penelitian dilakukan pada bulan November 2018. Metode pengambilan data menggunakan metode destruktif dan perhitungan data meliputi nilai kadar air, kadar abu, karbon dan serapan karbondioksida di Laboratorium Dasar Fakultas Pertanian. Berdasarkan hasil yang diperoleh mangrove yang memiliki total serapan karbondioksida tertinggi adalah mangrove jenis *Rhizophora stylosa* dengan nilai serapan CO_2 sebesar 738,5 gram CO_2 /1000 gr pohon, yang penyerapan tertinggi terdapat pada bagian batang sebesar 163,62 gr CO_2 /1000 gr pohon. Nilai serapan karbondioksida tertinggi kedua terdapat pada jenis *Bruguiera gymnorhiza* sebesar 713,65 gr CO_2 /1000 gr pohon dengan penyerapan tertinggi terdapat pada bagian daun sebesar 160,18 gram CO_2 /1000 gr pohon dan yang memiliki penyerapan CO_2 terendah yaitu *Avicennia marina* sebesar 700,93 gr CO_2 / 1000 gr pohon, dengan penyerapan tertinggi juga terdapat pada daun sebesar 147,33 gr CO_2 /1000 gr pohon.

Kata Kunci : Stok, Karbon, Mangrove dan Perairan Tuban