

## ABSTRAK

**Lia Annisa, NIM 4201220002 (2020), Serapan Karbon pada Empat Jenis mangrove (*Rhizophora apiculata*, *Bruguiera parviflora*, *Avicennia alba*, *Xylocarpus granatum*) di Desa Selotong.**

Suaka Margasatwa Karang Gading Langkat Timur Laut merupakan kawasan perlindungan mangrove yang sangat potensial bagi penyerapan karbon. Penelitian ini bertujuan untuk mengetahui jumlah kandungan biomassa, tingkat serapan karbon dan perbandingan serapan karbon dioksida pada empat jenis daun mangrove (*Rhizophora apiculata*, *Bruguiera parviflora*, *Avicennia alba*, *Xylocarpus granatum*) di Desa Selotong. Pengambilan sampel dilakukan pada tiga setasiun yang ditentukan secara purposive sampling masing-masing dengan pengambilan sampel tiga ulangan. Daun Mangrove di analisis di laboratorium dengan mengukur kadar air dan kadar abu dengan metode Loi (*loss on ignition*). Hasil penelitian menunjukkan bahwa serapan karbon dari yang tertinggi hingga terendah secara berturutan adalah *Rhizophora apiculata*  $28,4 \pm 0,6$  (g/g-kering), *Bruguiera parviflora*  $27,6 \pm 0,3$  (g/g-kering), *Xylocarpus granatum*  $26,3 \pm 2,3$  (g/g-kering) dan *Avicennia alba*  $25,7 \pm 1,8$  (g/g-kering). Analisis statistik panjang, lebar, dan tebal daun dari ke 4 jenis daun mangrove tidak menunjukkan perbedaan terhadap daya serap CO<sub>2</sub>.

**Kata kunci:** Biomassa, Mangrove, Selotong, Serapan karbon.



## ABSTRACT

**Lia Annisa, NIM 4201220002 (2020), Carbon Uptake in Four Types of Mangroves (*Rhizophora apiculata*, *Bruguiera parviflora*, *Avicennia alba*, *Xylocarpus granatum*) in Selotong Village.**

Karang Gading Wildlife Reserve East Langkat is a mangrove protection area that has great potential for carbon sequestration. This research aims to determine the amount of biomass content, level of carbon uptake and comparison of carbon dioxide uptake in four types of mangrove leaves (*Rhizophora apiculata*, *Bruguiera parviflora*, *Avicennia alba*, *Xylocarpus granatum*) in Selotong Village. Sampling was carried out at three stations determined by purposive sampling, each with three replicate samples. Mangrove leaves are analyzed in the laboratory by measuring the water content and ash content using the Loi (loss on ignition) method. The results showed that carbon uptake materials from highest to lowest respectively was *Rhizophora apiculata*  $28.4 \pm 0.6$  (g/g-dry), *Bruguiera parviflora*  $27.6 \pm 0.3$  (g/g-dry), *Xylocarpus granatum*  $26.3 \pm 2.3$  (g/g-dry) and *Avicennia alba*  $25.7 \pm 1.8$  (g/g-dry). Statistical analysis of the length, width and thickness of the leaves of the 4 types of mangrove leaves showed no difference in CO<sub>2</sub> absorption capacity.

**Key words:** Biomass, Mangrove, Selotong, Carbon uptake.

