ABSTRAK

IRSAL IBRAHIM. **NPM 05161711038**. Estimasi Stok Karbon Mangrove Di Lahan Rehabilitasi Menggunakan Foto Udara Di Kelurahan Rua Kecamatan Pulau Ternate, Kota Ternate. Dibimbing oleh **Dr. NURHALIS WAHIDDIN** dan **ADI NOMAN SUSANTO.**

Hutan mangrove merupakan sekumpulan pepohonan yang biasnya tumbuh di area sekitar garis pantai yang dipengaruhi oleh pasang surutnya air laut, serta berada pada tempat yang mengalami akumulasi bahan organik dan pelumpuran. Penelitian ini bertujuan adalah identifikasi jenis mangrove di Kelurahan Rua,menganalisis biomasa mangrove, menganalisis simpanan karbon, menganalisis serapan CO_2, Penelitian ini menggunakan metode *Purposive sampling,*pengambilan data dilakukan di tiga stasiun, masing-masing stasiun di bagi menjadi tiga plot, masing-masing plot dibentangkan transek berukuran 10 x 10 m. Setiap plot menggunakan meteran rol dengan cara keliling batang mangrove. Hasil Penelitian menunjukkan bahwa di Kelurahan Rua terdapat jenis mangarove sebanyak 4 jenis *Rhizopora stylosa, Rhzipoora apiculata, Avicennia alba,* dan *Sonneratia alba.* Dan analisis biomassa mangrove dilakukan melalui persamaan alometrik berdasrkan DBH dan biomassa yang diperoleh setelah itu di analisis simpan karbon pada 3 jenis mangrove diantarannya jenis *Rhizophora Apiculata.* Biomassa 1.0666 Ton/Ha,simpanan karbon 0.5333 Ton/Ha dan serapan CO_2 1.9572 Ton/Ha pada jenis *Rhizophora Stylosa.* Biomassa 2.4991 Ton/Ha,simpanan karbon 1.2496 Ton/Ha dan serapan CO_2 4.5859 Ton/Ha jenis *Sonneratia alba.* Biomassa 2.5107 Ton/Ha,simpanan karbon 1.2553 Ton/Ha dan serapan CO_2 4.6071 Ton/Ha

Kata kunci :Estimasi stok karbon, Mangrove, Kota Ternate

ABSTRACT

IRSAL IBRAHIM. NPM 05161711038. Estimation of mangrove carbon stock in rehabilitation land using aerial photographs in Rua Village, Ternate Island District, Ternate City. Guided by **Dr. NURHALIS WAHIDDIN** and **ADI NOMAN SUSANTO.**

Mangrove forests are a group of trees that tend to grow in areas around the coastline that are affected by the tides of sea water, and are located in places where organic matter and silt accumulate. This study aims to identify the types of mangroves in Rua Village, analyze mangrove biomass, analyze carbon storage, analyze CO_2 uptake, this research uses *the Purposive sampling* method, data collection is carried out at three stations, each station is divided into three plots, each plot is stretched out with a transect measuring 10 x 10 m. Each plot uses a roller meter by circling the mangrove trunk. The results of the study showed that in Rua Village there were 4 types of mangarove as many as *Rhizopora stylosa, Rhzipoora apiculata, Avicennia alba,* and *Sonneratia alba.* And the analysis of mangrove biomass was carried out through an allometric equation based on DBH and the biomass obtained after that in the analysis of carbon storage in 3 types of mangroves, including *the type of Rhizophora apiculata.* Biomass is 1.0666 Tons/Ha, carbon storage is 0.5333 Tons/Ha and CO_2 absorption is 1.9572 Tons/Ha in *Rhizophora Stylosa.* Biomass is 2,4991 Tons/Ha, carbon storage is 1,2496 Tons/Ha and CO_2 absorption is 4,5859 Tons/Ha of *Sonneratia alba.* Biomass 2,5107 Tons/Ha, carbon storage 1,2553 Tons/Ha and CO_2 absorption 4,6071 Tons/Ha

Keywords :Estimated carbon stock, Mangrove, Ternate City