

NANDA WAHYU PRADITA. NRP. 19.03.4.1.1.00027. Analisis Biomassa dan Simpanan Karbon Pada Ekosistem Mangrove Di Desa Tengket, Kecamatan Arosbaya, Bangkalan. Dibawah bimbingan **Dr. Zainul Hidayah, S.Pi., M.App.Sc**

ABSTRAK

Pemanasan global menyebabkan suhu rata-rata permukaan bumi meningkat sehingga menimbulkan gelombang pasang yang mengancam ekosistem pesisir. Ekosistem yang mampu menanggulangi pemanasan global salah satunya ekosistem mangrove dengan kemampuannya dalam menyerap dan menyimpan karbon dalam bentuk biomassa dan sedimen. Desa Tengket merupakan wilayah pesisir yang mempunyai ekosistem mangrove sebesar 104.9 ha. Tujuan Penelitian ini mengetahui jenis mangrove, nilai biomassa total dan simpanan karbon di kawasan mangrove Desa tengket, Kecamatan Arosbaya, Bangkalan. Metode pelaksanaan peneliti ini terbagi menjadi pengambilan data lapang, pengukuran lingkaran batang, identifikasi mangrove, pengolahan data dan analisis data. Pembuatan plot menggunakan transek berukuran 10 x 10 m sebanyak 3 plot di masing-masing stasiun. Hasil penelitian menunjukkan dari transek ditemukan 4 spesies mangrove yaitu *Avicennia alba*, *Avicennia marina*, *Rhizophora mucronata* dan *Sonneratia alba*. Lokasi penelitian memiliki indeks nilai penting sebesar 268.79 pada stasiun 2 plot 3 yang didominasi oleh *Rhizophora mucronata*, mempunyai tingkat keanekaragaman dan keseragaman yang rendah dan dominansi yang tinggi, serta persen tutupan kanopi mangrove termasuk dalam kategori sedang menuju baik dengan rata-rata 75.5%. Biomassa total yang didapatkan sebesar 348.49 ton/ha. Simpanan karbon total yang didapatkan sebesar 154.86 ton/ha dan pendugaan simpanan karbon pada Desa Tengket dengan luas mangrove 104.9 ha berkisar 1804.87 ton/ha.

Kata Kunci: Mangrove, Biomassa, Simpanan Karbon, Desa Tengket

NANDA WAHYU PRADITA. NRP. 19.03.4.1.1.00027. Analysis of Biomass and Carbon Storage in Mangrove Ecosystems in Tengket Village, Arosbaya District, Bangkalan. Under the guidance of **Dr. Zainul Hidayah, S.Pi., M.App.Sc**

ABSTRACT

Global warming causes the average temperature of the earth's surface to increase, causing tidal waves that threaten coastal ecosystems. One of the ecosystems capable of tackling global warming is the mangrove ecosystem with its ability to absorb and store carbon in the form of biomass and sediment. Tengket Village is a coastal area that has a mangrove ecosystem of 104.9 ha. The purpose of this study was to determine the type of mangrove, total biomass value and carbon storage in the mangrove area of Tengket Village, Arosbaya District, Bangkalan. The method used by this researcher is divided into field data collection, stem circumference measurement, mangrove identification, data processing and data analysis. Plots were made using a 10 x 10 m transect with 3 plots at each station. The results showed that from the transects, 4 mangrove species were found, namely *Avicennia alba*, *Avicennia marina*, *Rhizophora mucronata* and *Sonneratia alba*. The research location had an important value index of 268.79 at station 2 plot 3 which was dominated by *Rhizophora mucronata*, had a low level of diversity and uniformity and high dominance, and the percent cover of the mangrove canopy was included in the category of being good with an average of 75.5%. The total biomass obtained was 348.49 tons/ha. The total carbon stock obtained was 154.86 tons/ha and the estimated carbon stock in Tengket Village with a mangrove area of 104.9 ha was around 1804.87 tons/ha.

Keywords: Mangroves, Biomass, Carbon Stores, Tengket Village