

ABSTRAK

Sebesar 40% dari total luas mangrove di Surabaya telah mengalami kerusakan akibat perubahan tata guna lahan, degradasi dan industri. Mangrove merupakan tanaman pepohonan atau komunitas tanaman yang hidup diantara laut dan daratan yang dipengaruhi oleh pasang surut. Tujuan penelitian ini untuk mengetahui perbandingan stok karbon yang terdapat pada pohon mangrove di Kecamatan Kenjeran dan Kecamatan Rungkut Surabaya, Jawa Timur. Metode pelaksanaan dalam penelitian ini terbagi menjadi beberapa tahapan, yaitu pengambilan data lapang, pengukuran diameter batang (DBH), identifikasi mangrove, pengolahan data, dan analisis data. Pembuatan plot menggunakan metode petak berukuran 10 x 10 m sebanyak 5 plot di sepanjang garis pantai pada masing – masing stasiun. Hasil penelitian menunjukkan dari sepanjang garis transek ditemukan 4 spesies mangrove yaitu *Avicennia marina*, *Avicennia alba*, *Rhizophora mucronata*, dan *Sonneratia alba*. Jenis mangrove yang mendominasi pada stasiun 1 adalah *Avicennia marina* nilai kerapatan 780 pohon/ha dengan biomassa total sebesar 200.35 Kg, sedangkan pada stasiun 2 jenis yang mendominasi *Avicennia alba* nilai kerapatan 740 pohon/ha. Secara keseluruhan perbandingan stok karbon yang dihasilkan, stasiun 2 memiliki nilai tertinggi yaitu sebesar 16.33 C Ton/ha.

Kata Kunci : Surabaya, Kerapatan, Mangrove, Biomassa, Stok Karbon

ABSTRACT

40% of the total mangrove area in Surabaya has been damaged due to changes in land use, degradation and industry. Mangroves are tree plants or plant communities that live between the sea and land affected by tides. The purpose of this study was to determine the comparison of carbon stocks found in mangrove trees in the Kenjeran District and Rungkut District, Surabaya, East Java. The method of implementation in this study is divided into several stages, namely taking field data, measuring stem diameter (DBH), identifying mangroves, processing data, and analyzing data. Making plots using a 10 x 10 m plot method as many as 5 plots along the coastline at each station. The results showed that along the transect line 4 mangrove species were found, namely *Avicennia marina*, *Avicennia alba*, *Rhizophora mucronata*, and *Sonneratia alba*. The type of mangrove that dominates at station 1 is *Avicennia marina* with a density value of 780 trees/ha with a total biomass of 200.35 Kg, while in station 2 the type that dominates *Avicennia alba* has a density value of 740 trees/ha. Overall, the comparison of the carbon stock produced, station 2 has the highest value of 16.33 C Ton/ha.

Keywords: *Surabaya, Density, Mangrove, Biomass, Carbon Stock*