ABSTRAK

Alfandi Putra Jaya Dawolo, NIM 4212520005 (2021), Serapan Karbondioksida (CO_2) Pada Daun Mangrove di Desa Tanjung Rejo

Pantai Mangrove Paluh Getah di Desa Tanjung Rejo merupakan kawasan wisata 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 (*Avicennia marina*, *Excoecaria agallocha*, *Bruguiera gymnorhiza*, dan *Ceriops tagal)* dan pengaruh tebal, lebar, dan panjang daun terhadap tingkat serapan karbon di Desa Tanjung Rejo. 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 metode *Walkey and Black* untuk mengetahui kandungan karbon pada daun. Hasil penelitian menunjukkan bahwa *Avicennia marina* memiliki potensi serapan tertinggi, diikuti oleh *Bruguiera gymnorhiza*, *Ceriops tagal*, dan *Excoecaria agallocha*. Pengukuran panjang, lebar, dan tebal daun dari ke 4 jenis daun mangrove menunjukkan adanya indikasi perbedaan terhadap daya serap CO_2.

Keywords: Biomassa, Mangrove, Tanjung Rejo, Serapan karbon

ABSTRACT

Alfandi Putra Jaya Dawolo, Student ID 4212520005 (2021). Carbon Dioxide (CO_2) Sequestration in Mangrove Leaves at Tanjung Rejo Village

The Mangrove Coastal Area of Paluh Getah in Tanjung Rejo Village is a promising ecotourism site with significant potential for carbon sequestration. This study aims to determine the biomass content, carbon sequestration capacity, and the comparative CO_2 absorption rates among four mangrove leaf species (*Avicennia marina*, *Excoecaria agallocha*, *Bruguiera gymnorhiza*, and *Ceriops tagal*), as well as to analyze the influence of leaf thickness, width, and length on carbon absorption levels in Tanjung Rejo Village. Samples were collected from three purposively selected stations, with three replicates taken at each site. The leaf samples were analyzed in the laboratory using the *Walkley and Black* method to determine their carbon content. The results showed that *Avicennia marina* had the highest carbon sequestration potential, followed by *Bruguiera gymnorhiza*, *Ceriops tagal*, and *Excoecaria agallocha*. Measurements of leaf length, width, and thickness among the four mangrove species indicated a variation in CO_2 absorption capacity.

Keywords: Biomass, Mangrove, Tanjung Rejo, Carbon Sequestration.