

ABSTRAK

Fikriyadi Selpia. NPM 05181911035. Analisis Kandungan Karbon Dalam Sedimen Mangrove di Desa Kaiyasa Kecamatan Oba Utara. Dibimbing oleh Dr. Najamudin S.T, M.Si dan Ir. Zulhan Arifin Harahap M.A, Ph.D.

Hutan bakau atau biasa kita sebut juga hutan mangrove merupakan salah satu tipe hutan dari berbagai jenis hutan di Indonesia. Ekosistem mangrove mampu menyimpan menyerap karbon empat kali lebih banyak dari hutan hujan tropis dan menyimpannya lebih lama. Namun dibandingkan dengan penyimpanan pada jaringan tubuh hutan mangrove, kandungan karbon tertinggi terdapat pada sedimen. Maluku Utara memiliki kawasan ekosistem mangrove yang masih baik dan tersebar di berbagai wilayah Maluku Utara, salah satunya adalah kawasan ekosistem mangrove di perairan Kaiyasa.

Penelitian dilakukan di area kawasan hutan mangrove di Desa kaiyasa Kecamatan Oba Utara. Jenis pengambilan sampel sedimen terdiri dari 3 stasiun dan setiap stasiun terdiri dari dua line transek dan setiap transek terdiri dari tiga kuadran ukuran 10 x 10 meter dengan cara merentangkan tali rafia berukuran 10 x 10 meter dalam bentuk persegi empat. Jarak antara transek 50 meter, Dalam tiap kuadran dilakukan pengamatan mangrove dan pengambilan sampel sedimen, pengambilan sampel sedimen menggunakan corer yang berukuran 10 cm, setelah pengambilan sampel sedimen pada mangrove selanjutnya di analisis pada laboratorium Bio Ekologi Sumberdaya Perairan. Hasil penelitian di peroleh kandungan karbon tertinggi terdapat pada stasiun 2 di bagian atas dengan jumlah 58.26 g C/cm³ dan yang terendah terdapat pada bagian tengah di stasiun 2 dengan jumlah 48.62 g C/cm³. Hubungan kandungan karbon dan karakteristik sedimen menunjukkan korelasi negatif pada stasiun 1 dan 3 sedangkan pada stasiun 2 menunjukkan korelasi positif, tekstur yang dominan di lokasi penelitian berupa tekstur kerikil.

Kata Kunci : karbon, sedimen, mangrove, Kaiyasa.

ABSTRACT

Fikriyadi Selpia. NPM 05181911035. Analysis of Carbon Content in Mangrove Sediments in Kaiyasa Village, North Oba District. Supervised by Dr. Najamudin S.T, M.Si and Ir. Zulhan Arifin Harahap M.A, Ph.D.

Mangrove forests or what we usually call mangrove forests are one type of forest from various types of forests in Indonesia. Mangrove ecosystems are able to store four times more carbon than tropical rainforests and store it for longer. However, compared to storage in mangrove forest tissue, the highest carbon content is found in sediment. North Maluku has mangrove ecosystem areas that are still good and spread across various areas of North Maluku, one of which is the mangrove ecosystem area in Kaiyasa waters.

The research was conducted in the mangrove forest area in Kaiyasa Village, North Oba District. This type of sediment sampling consists of 3 stations and each station consists of two line transects and each transect consists of three quadrants measuring 10 x 10 meters by stretching a neat rope measuring 10 x 10 meters in a rectangular shape. The distance between the transects is 50 meters. In each quadrant, mangrove observations are carried out and sediment samples are taken. Sediment samples are taken using a 10 cm corer. After taking sediment samples from the mangroves, they are then analyzed in the Aquatic Resources Bio-Ecology laboratory. The research results showed that the highest carbon content was at station 2 at the top with a total of 58.26 g C/cm³ and the lowest was in the middle at station 2 with a total of 48.62 g C/cm³. The relationship between carbon content and sediment characteristics shows a negative correlation at stations 1 and 3, while at station 2 shows a positive correlation, the dominant texture at the research location is gravel texture.

Keywords: carbon, sediment, mangrove, Kaiyasa.