ABSTRACT

KHOIRUNISA. 05161711005. Production and Decomposition Rate of Mangrove Leaf Litter on Manomadehe Island, South Jailolo District, West Halmahera Regency. Under academic supervision **SALIM ABUBAKAR** and **MESRAWATY SABAR.**

The mangrove forest ecosystem is one of the ecosystems that has high productivity compared to other ecosystems. Litter production is the main supporter of fishery potential, because organic matter produced from litter makes mangrove forests a source of food and a place for nurturing various biota such as fish, shrimp and crabs. On Manomadehe Island, the community still continues to cut mangroves to make firewood and building materials. Activities like this will result in damage to the mangrove forest and a decrease in the amount of litter production. Research objectives 1. Knowing the composition of the type and density of mangroves on Manomadehe Island, South Jailolo District, West Halmaahera Regency. 2. Knowing the amount of mangrove leaf litter production on Manomadehe Island, South Jailolo District, West Halmahera Regency. 3. Knowing the rate of decomposition of mangrove leaf litter on Manomadehe Island, South Jailolo District, West Halmahera Regency. This research will be carried out on Manomadehe Island, South Jailolo District, West Halmahera Regency from June to August 2021. This research was carried out in June-August 2020 using purposive sampling method to determine stations, density (*line transect plot*), production of leaf litter mangrove *litter-trap* (litter collection net), and *litter-bag* leaf litter decomposition rate. In general, the composition of mangrove species found at the study site on Manomadehe Island consisted of 3 families with 6 species (*Rhizophora stylosa, Rhizophora apiculata, Rhizophora mucronata, Sonneratia alba, Avicennia marina, Avicennia lanata*). The total production of mangrove leaf litter was 1276.59, the highest was at Station I 589.80 grams/m2/60days and the highest production of *Rhizophora stylosa* was 424.25 grams/m2/60days. The highest decomposition rate of station I was 0.20 g/day and the types of *Avicennia lanata and Avicennia marina* were 0.25 g/day.

Keywords*: mangrove leaves, litter production, decomposition rate, Manomadehe*

RINGKASAN

KHOIRUNISA. 05161711005. Poduksi dan Laju Dekomposisi Serasah Daun Mangrove di Pulau Manomadehe Kecamatan Jailolo Selatan Kabupaten Halmahera Barat. Dibimbing oleh **SALIM ABUBAKAR** dan **MESRAWATY SABAR.**

Ekosistem hutan mangrove merupakan salah satu ekosistem yang memiliki produktivitas tinggi dibandingkan ekosistem lain. Produksi serasah merupakan pendukung utama potensi perikanan, karena materi organik yang dihasilkan dari serasah menjadikan hutan mangrove sebagai tempat sumber makanan dan tempat asuhan berbagai biota seperti ikan, udang dan kepiting. Di Pulau Manomadehe masyarakat masih terus melakukan kegiatan penebangan mangrove untuk dijadikan kayu bakar dan bahan bangunan. Kegiatan seperti ini akan mengakibatkan hutan mangrove mengalami kerusakan dan menurunnya jumlah produksi serasah. Tujuan penelitian 1. Mengetahui komposisi jenis dan kerapatan mangrove di Pulau Manomadehe Kecamatan Jailolo Selatan Kabupaten Halmaahera Barat. 2. Mengetahui jumlah produksi serasah daun mangrove di Pulau Manomadehe Kecamatan Jailolo Selatan Kabupaten Halmahera Barat. 3. Mengetahui laju dekomposisi serasah daun mangrove di Pulau Manomadehe Kecamatan Jailolo Selatan Kabupaten Halmahera Barat. Penelitian ini akan dilaksanakan di Pulau Manomadehe Kecamatan Jailolo Selatan Kabupaten Halmahera Barat pada bulan Juni sampai dengan bulan Agustus 2021. Penelitian ini dilaksanakan pada Bulan Juni-Agustus 2020 dengan menggunakan metode *purposive sampling* untuk menentukan stasiun, kerapatan (*line transect plot*), produksi serasah daun mangrove *litter-trap* (jaring penampung serasah), dan laju dekomposisi serasah daun *litter-bag* (kantong wadah serasah). Komposisi jenis mangrove secara umum ditemukan di lokasi penelitian Pulau Manomadehe sebanyak 3 famili dengan 6 jenis (*Rhizophora stylosa*, *Rhizophora apiculata*, *Rhizophora mucronata*, *Sonneratia alba*, *Avicennia marina*, *Avicennia lanata*). Total jumlah produksi serasah daun mangrove yaitu 1276,59, tertinggi di Stasiun I 589,80 gram/m^2/60hari dan produksi tertinggi jenis *Rhizophora stylosa* yaitu 424,25 gram/m^2/60hari. Laju dekomposisi tertinggi stasiun I 0,20 g/hari dan jenis *Avicennia lanata* dan *Avicennia marina* yaitu 0,25 g/hari.

Kata Kunci : *daun mangrove, produksi serasah, laju dekomposisi, Manomadehe*