Komposisi vegetasi, potensi stok karbon, produksi dan laju dekomposisi serasah mangrove di Pancer Cengkrong, Trenggalek, Jawa Timur = Vegetation composition, carbon stock potency, production and decomposition rates mangroves litter on Pancer Cengkrong, Trenggalek, East Java

Nova Maulidina Ashuri, author

Abstrak

Penelitian dilakukan pada bulan Maret--Juni 2013 di Hutan Mangrove Pancer Cengkrong, Trenggalek, Jawa Timur. Penelitian bertujuan untuk memperoleh informasi komposisi vegetasi, potensi stok karbon, produksi, laju dekomposisi dan kontribusi nutrisi serasah mangrove. Komposisi vegetasi diukur menggunakan transek kuadran. Stok karbon diestimasi dengan persamaan allometrik. Produksi serasah dihitung menggunakan perangkap serasah ukuran 1x1m2. Laju dekomposisi serasah diukur selama 56 hari dengan pengamatan 2 minggu sekali. Kontribusi serasah ke perairan diperoleh dengan menyaring serasah pada saluran air saat laut surut. Sebanyak 26 spesies telah diidentifikasi (17 mangrove sejati dan 9 mangrove asosiasi). Vegetasi pohon didominasi oleh Sonneratia alba J.E. Smith dengan kerapatan 596 pohon/ha sedangkan anakan dan semai didominasi Ceriops tagal (Perr.) C.B. Robinson (kerapatan 1.745 anakan/ha; 34.745 semai/ha). Stok karbon dan biomassa total di lokasi penelitian masing-masing 185,81 ton/ha dan 400,45 ton/ha (total serapan CO2 sebesar 681,91 ton/ha). Sebagian besar sumbangan stok karbon berasal dari S. alba, Rhizophora apiculata Blume, dan Avicennia alba Blume. Produksi serasah 1,42 g/m2/hari, tersusun atas daun 84%, organ reproduksi 9% dan ranting 7%. Potensi nutrisi serasah 0,4 gC/m2/hari dan 0,012 gN/m2/hari. Serasah dilepas ke perairan sebesar 11,15 g/m3/hari. Laju dekomposisi serasah daun paling cepat ialah R. apiculata (0,20 g/hari). Nilai nutrisi tertinggi terdapat pada S. alba dengan rasio C:N 62,90.
.....Research has been conducted in March--June 2013 on the Mangrove Forest Cengkrong Pancer, Trenggalek, East Java. The objectives were to obtain information of vegetation composition, potential carbon stocks, production, decomposition rates, and nutrient contribution of mangrove litter. There were 50 quadrants on tree stations for vegetation analysis. Potential carbon stock was calculated by allometric equations. Littertrap size 1x1 m2 used to calculate litter production. Decomposition rate calculated for 56 days by once observation in two weeks. Litter contribution to waters was obtained by filtering water channel at low tide. The total of 26 species were identified (17 true mangroves and 9 association mangroves). The vegetation dominated by Sonneratia alba J.E. Smith (596 trees/ha) while the saplings and seedlings dominated by Ceriops tagal (Perr.) C.B. Robinson (1,745 saplings/ha; 34,745 seedlings/ha). Total biomass were 400.45 ton/ha and carbon stocks 185.81 ton/ha (CO2 uptake 681,91 ton/ha). The carbon stocks were donated from S. alba, Rhizophora apiculata Blume, dan Avicennia alba Blume. The production of litter was 1.42 g/m2/day consisting of leaves 84%, reproductive organs 9%, and twigs 7% respectively. The litter contained 0.4 gC/m2/day and 0.012 gN/m2/day. In addition 11.15 g/m3/day litters flow towards the waters during high tide. The fastest decomposition rate of leaf litter was R. apiculata (0.20 g/day). While the highest nutritional value from S. alba with C:N ratio of 62.90.