

## INTISARI

Kawasan mangrove di Indonesia diperkirakan mencapai luas 4,25 juta hektar atau kurang lebih 3,6 % dari total luas hutan. Dari jumlah tersebut 40.000 ha terdapat di Kalimantan Barat. Komposisi dan struktur vegetasi serta keanekaragaman dan kepadatan biota mangrove alam, khususnya di luar Jawa masih banyak belum diketahui, padahal sangat diperlukan dalam pemanfaatan mangrove agar keberadaannya lestari.

Studi ini bertujuan untuk mengetahui 1) komposisi jenis penyusun, 2) pola pengelompokan/zonasi vegetasi, keanekaragaman dan kepadatan biotanya, 3) pengaruh faktor lingkungan (sifat kimia tanah dan air) terhadap pola pengelompokan/zonasi, 4) pengaruh zonasi terhadap kepadatan biota.

Areal penelitian dibagi menjadi 15 releve. Penelitian dilaksanakan dengan menggunakan sistem jalur selebar 20 m dan panjang 1.000 m, sebanyak 9 jalur pengamatan yang tegak lurus garis pantai, jarak antar jalur 200 m. Pada setiap jalur dibuat petak pengamatan ukuran 20 x 20 m untuk pohon, 5 x 5 m untuk sapihan, dan 2 x 2 m untuk semai. Pengamatan biota dilakukan pada 6 petak ukur 5 x 5 m dalam tiap releve.

Hasil penelitian menunjukkan bahwa jenis penyusun untuk tingkat semai, sapihan, dan pohon didominasi oleh *Rhizophora mucronata*, *Bruguiera gymnorhiza*, *Avicennia marina*, *Exoecaria agallocha*, dan *Heritiera littoralis*. Berdasarkan analisis ordinasi dua dimensi diketahui bahwa terdapat 3 zonasi vegetasi yang sejajar garis pantai. Zonasi tersebut berhubungan dengan faktor lingkungan (sifat kimia tanah) yang meliputi kandungan unsur P, K, dan Na, SAR, salinitas tanah, pH tanah, dan salinitas air serta pH air.

Pengamatan terhadap biota menunjukkan bahwa kepadatan biota dipengaruhi oleh zonasi, ke arah dalam semakin menurun. Keanekaragaman biota antar zona tidak berbeda, kecuali kelompok nekton. Kelompok nekton pada zona luar dan tengah didominasi oleh *Periopthalmus*, *Littorina*, *Uca* dan *Penaeus*, sedangkan zona dalam didominasi *Ellobium*.

## ABSTRACT

Mangrove area in Indonesia is estimated to the extent of 4.25 million hectares or approximately 3.6 % of total forest area. Out of the area 40,000 hectares is found in West Kalimantan. Vegetation composition and structure of natural mangrove, area as well as diversity and density of marine biota of the area, particularly area outside Java, are limitedly known when in fact such information is of particular important for their perpetuation if the area is going to be exploited.

The present study has the objectives of determining : 1) species composition of mangrove area, 2) zonation of mangrove vegetation, density and diversity of marine biota 3) effect of environmental factors (chemical properties of soil and water ) on the zonation pattern, and 4) effect of vegetation zonation on marine biota density.

Study area is divided into 15 releves. The study was done using 9 strips or transects of 20 m width and 1,000 m length perpendicular to the coastal line. In each strip, plot of size 20 x 20 m for tree observation, 5 x 5 m for sapling observation, and 2 x 2 m for seedling stage observation were made. Records on marine biota were done using plot size of 5 x 5 m in each releve.

The results indicated that vegetation composition at seedling, sapling, tree stage was dominated by *Rhizophora mucronata*, *Bruguiera gymnorhiza*, *Avicennia marina*, *Exoecaria agallocha*, and *Heritiera littoralis*. Two dimensional ordination analysis revealed three coastal line paralleled vegetation zones. It was somehow related to environmental factor (i.e. chemical properties of soil and water) which involved P, K, Na, SAR, soil salinity, soil pH, water salinity, and water pH.

Data on marine biota showed that their diversity was zonation dependent with less dense towards the coastal line. Between zonal diversity of marine biota was similar except for necton. Necton group in the outermost and middle zone was dominated by *Periopthalmus*, *Littorina*, *Uca* and *Penaeus*, while the innermost zona was dominated by *Ellobium*.

