

**PENGARUH REHABILITASI HUTAN MANGROVE TERHADAP
KEANEKARAGAMAN PLANKTON DAN NEKTON DI PANTAI UTARA
KABUPATEN INDRAMAYU JAWA BARAT
(Studi Kasus di Desa Pabean Ilir, Kecamatan Sindang, Kabupaten
Indramayu Jawa Barat)**

Oleh :
Agustina Rahayu Susilowati¹
Dr. Erny Poedjirahajoe, M.P.²

INTISARI

Pohon, plankton, nekton dan faktor lingkungan (fisik dan kimia) merupakan komponen dalam ekosistem hutan mangrove. Penelitian ini bertujuan memberikan informasi mengenai komposisi vegetasi, keanekaragaman plankton dan nekton serta faktor lingkungan yaitu fisik dan kimia di kawasan rehabilitasi hutan mangrove Pantai Utara Kabupaten Indramayu Jawa Barat.

Penelitian menggunakan analisis varians dalam CRD dengan 3 perlakuan yaitu tahun tanam 2004, 1997 dan 1980. Masing-masing dibagi menjadi 3 zona yaitu darat, tengah dan laut. Dengan masing-masing tahun tanam 15 petak ukur, data yang dianalisis meliputi komposisi dan kepadatan vegetasi, keanekaragaman plankton dan nekton serta faktor lingkungan (fisik dan kimia).

Hasil penelitian menunjukkan ada 4 jenis tumbuhan penyusun hutan mangrove yaitu *Rhizophora stylosa*, *Avicennia marina*, *A.alba* dan *A.officinalis* dengan kepadatan tertinggi pada tahun tanam 2004 yaitu 5.360 pohon/ha. Fitoplankton didominasi oleh alga, *Dinoflagellata* dan *Diatomae* dengan kepadatan tertinggi pada tahun tanam 2004 yaitu 503.986 individu/ml. Indeks Diversitas fitoplankton tertinggi pada tahun tanam 1997 yaitu 0,97. Zooplankton didominasi flagelata dan bakteri dengan kepadatan tertinggi pada tahun tanam 2004 yaitu 107.325 individu/ml dan Indeks Diversitas tertinggi pada tahun tanam 2004 yaitu 0,91. Kepadatan nekton tertinggi pada tahun tanam 1997 yaitu 62 individu/m² dengan Indeks Diversitas tertinggi pada tahun tanam 1997 yaitu 0,57. Faktor fisik dan kimia yaitu suhu, salinitas, pH, oksigen terlarut dan tebal lumpur akan sangat mendukung terhadap kepadatan dan keanekaragaman plankton serta nekton di rehabilitasi hutan mangrove.

Kata Kunci : Pohon mangrove, plankton, nekton, faktor lingkungan

1. Mahasiswa S1 Jurusan Konservasi Sumber Daya Hutan, Fakultas Kehutanan, Universitas Gajah Mada.
2. Pembimbing Utama dan Staf Pengajar Jurusan Konservasi Sumber Daya Hutan, Fakultas Kehutanan, Universitas Gajah Mada.

**THE EFFECT OF MANGROVE FOREST REHABILITATION TO
PLANKTON AND NEKTON DIVERSITY ON THE NORTH COAST OF
INDRAMAYU REGENCY, WEST JAVA
(Case Study on Pabean Ilir Village, Sindang District, Indramayu Regency,
West Java)**

By :
Agustina Rahayu Susilowati¹
Erny Poedjirahajoe²

ABSTRACT

Trees, plankton, nekton and environmental factors (physical and chemical) are components of the mangrove forest ecosystem. This research was held for the purpose of giving information about vegetation composition, plankton and nekton diversity and also the environmental factors, which are physical and chemical factors on the mangrove forest rehabilitation site on the North Shore of Indramayu Regency, West Java.

This research used the variance analysis on CRD with 3 treatments, which were plantation year in 2004, 1997 and 1980. Each was divided into 3 zones; land, middle and sea. With 15 sampling units in each plantation year, the analyzed data included composition and vegetation density, plankton and nekton diversity and also environmental factors (physical and chemical).

The result of this research showed that there were 4 kinds of mangrove forest vegetation composer; they were *Rhizophora stylosa*, *Avicennia marina*, *A. alba* and *A. officinalis*, plantation year 2004 had the highest density among all with 5.360 trees/hectar. Phytoplankton was dominated by alga, *Dinoflagelata* and *Diatomae* in high density on plantation year 2004 reached 503.986 individual/ml. The highest phytoplankton diversity index on plantation year 1997 reached 0,97. Zooplankton was dominated by flagellates and bacteria with the highest density on plantation year 2004 reached 107.325 individual/ml and the highest diversity index on plantation year 2004 reached 0,91. The highest nekton density on plantation year 1997 reached 62 individual/m² with the highest diversity index on plantation year 1997 reached 0,57. Physical and chemical factors, which are temperature, salinity, pH, dissolved oxygen and mud thickness, would really support the density and diversity of plankton and nekton in the mangrove forest rehabilitation site.

Keyword: Mangrove trees, plankton, nekton, environmental factors.

1. S1 college student majoring in Forest Resource Conservation. Forestry Faculty, Gadjah Mada University.
2. Consular and Teaching Staff in Forest Resource Conservation Department. Forestry Faculty, Gadjah Mada University.