

PENILAIAN KESEHATAN MANGROVE PADA KAWASAN EKOSISTEM ESENSIAL (KEE) MUARA KALI IJO, KECAMATAN AYAH, KABUPATEN KEBUMEN

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INTISARI

Kawasan Ekosistem Esensial (KEE) Muara Kali Ijo adalah salah satu ekosistem hutan mangrove dengan luas 18,5 ha yang di dalamnya berpotensi terkena gangguan akibat aktivitas pemanfaatan oleh masyarakat sekitar. Oleh karena itu, penilaian kesehatan mangrove perlu dilakukan untuk dapat mengetahui kondisi kesehatan hutannya. Penelitian ini bertujuan untuk mengetahui struktur komunitas hutan mangrove, mengetahui kondisi kesehatan mangrove, dan mengetahui perbedaan kondisi kesehatan mangrove pada setiap blok pengelolaan di KEE Muara Kali Ijo.

Penelitian dilakukan pada lima blok pengelolaan yang berada di KEE Muara Kali Ijo, yaitu blok rehabilitasi, pemanfaatan, koleksi tumbuhan, perlindungan, dan pemanfaatan khusus. Pengambilan data dilakukan melalui sampling pada masing-masing blok sebanyak 6 plot. Penilaian kesehatan mangrove dilakukan menggunakan analisis *Mangrove Health Index* (MHI) yang melibatkan variabel-variabel kondisi kesehatan mangrove, yang terdiri dari tutupan kanopi, tinggi pohon, diameter pohon, jumlah pancang-pohon, jumlah tonggak pohon, tutupan sampah, dan jenis substrat. Pengumpulan dan analisis data dilakukan dengan menggunakan aplikasi MonMang v2.0.

Hasil penelitian menunjukkan blok rehabilitasi dan perlindungan didominasi jenis *Nypa fruticans*, blok pemanfaatan dan koleksi tumbuhan didominasi jenis *Rhizophora mucronata*, sedangkan blok pemanfaatan khusus didominasi jenis *Rhizophora apiculata*. Untuk kondisi kesehatan mangrove di KEE Muara Kali Ijo berada pada tingkat cukup baik (*sedang/moderate*). Nilai MHI pada blok rehabilitasi 49,74%, blok pemanfaatan 43,33%, blok koleksi tumbuhan 47,03%, blok perlindungan 64,26%, dan blok pemanfaatan khusus 54,90%. Perbandingan kondisi kesehatan mangrove tidak berbeda nyata antar blok pengelolaan untuk variabel persentase tutupan kanopi, tinggi pohon, diameter pohon, biomassa mangrove, jumlah pohon ditebang, dan jenis substrat. Sementara itu, perbandingan kondisi kesehatan mangrove berbeda nyata antar blok pengelolaan untuk variabel kerapatan pohon, basal area pohon, dan persentase tutupan sampah. Secara keseluruhan, perbandingan untuk tingkat kesehatan mangrove di KEE Muara Kali Ijo berdasarkan pada nilai MHI menunjukkan hasil tidak berbeda nyata antar blok pengelolaan.

Kata kunci: KEE Muara Kali Ijo, *Mangrove Health Index* (MHI), kesehatan mangrove, MonMang.

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MANGROVE HEALTH ASSESSMENT IN ESSENTIAL ECOSYSTEM AREA (KEE) MUARA KALI IJO, AYAH SUB-DISTRICT, KEBUMEN DISTRICT

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ABSTRACT

The Muara Kali Ijo Essential Ecosystem Area is a 18.5 ha mangrove forest areas, that is potentially disturbed due to some activities by its surrounding communities. Therefore, mangrove forest health assessment is necessary to carry out to identify the current status of the Muara Kali Ijo mangrove forest. This study aims to observe the community structures, to identify the health condition, and to compare the mangrove forest health conditions among different management blocks around the ecosystem in Muara Kali Ijo.

The research was conducted to cover five management blocks located in KEE Muara Kali Ijo, namely rehabilitation, utilization, plant collection, protection, and special use blocks. Data were collected by sampling 6 plots in each block. Forest health assessment was conducted using Mangrove Health Index (MHI) analysis by observing several variables of forest health condition, such as canopy cover, tree height, tree diameter, number of saplings, number of tree bollards, litter cover, and substrate type. Data collection and analysis were conducted using the MonMang v2.0 application.

The results showed that the rehabilitation and protection block was dominated by *Nypa fruticans*; the utilization and plant collection block was dominated by *Rhizophora mucronata*, while the special utilization block was dominated by *Rhizophora apiculata*. The health of the mangrove forest in the KEE Muara Kali Ijo is in moderate level. MHI values in the rehabilitation block were 49.74%, utilization block 43.33%, plant collection block 47.03%, protection block 64.26%, and special use block 54.90%. The results of mangrove forest health conditions comparison among different management blocks were not significantly for variables of percentage canopy cover, tree height, tree diameter, mangrove biomass, number of trees cut down, and substrate type. Meanwhile, the comparisons of mangrove forest health conditions were significantly different among management blocks for the variables of tree density, tree basal area, and percentage of litter cover. Overall, the comparisons of mangrove forest health conditions in the KEE Muara Kali Ijo based on MHI values showed no significant differences among management blocks.

Keywords: KEE Muara Kali Ijo, *Mangrove Health Index* (MHI), mangroves health, MonMang.

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