

ABSTRAK

Penelitian ini bertujuan untuk menganalisis struktur komunitas dan kesehatan ekosistem mangrove dalam mendukung peran ekologi pesisir di Desa Mlajah, Kabupaten Bangkalan. Penelitian dilaksanakan pada bulan Mei hingga Oktober 2025 menggunakan metode deskriptif kuantitatif dengan pendekatan transek garis dan plot di empat stasiun pengamatan. Parameter yang diamati meliputi kualitas perairan (suhu, salinitas, pH, dan oksigen terlarut), keanekaragaman jenis, keseragaman, dominansi, serta indeks kesehatan mangrove (Mangrove Health Index – MHI) berdasarkan tutupan kanopi, diameter batang, dan jumlah pancang. Hasil penelitian menunjukkan bahwa kualitas perairan di seluruh stasiun masih berada dalam kisaran baku mutu dengan suhu 28–29°C, salinitas 17–19 ppt, pH 7,6–8,0, dan DO 3,1–4,9 mg/L. Ditemukan sembilan jenis mangrove yaitu *Rhizophora mucronata*, *R. stylosa*, *R. apiculata*, *Bruguiera gymnorhiza*, *B. cylindrica*, *Sonneratia alba*, *Avicennia marina*, *A. alba*, dan *Xylocarpus granatum*. Stasiun 1 memiliki keanekaragaman sedang ($H' = 1,5$), keseragaman tinggi ($E = 0,93$), dan dominansi rendah ($C = 0,25$) yang menunjukkan komunitas lebih stabil dibandingkan stasiun lainnya. Nilai MHI menunjukkan kondisi kesehatan sedang pada seluruh stasiun, dengan nilai tertinggi pada Stasiun 2 (63,01%) dan terendah pada Stasiun 3 (56,49%). Secara keseluruhan, ekosistem mangrove di Desa Mlajah tergolong dalam kondisi sedang hingga cukup baik, namun beberapa lokasi menunjukkan indikasi tekanan lingkungan yang dapat memengaruhi regenerasi dan keseimbangan ekosistem. Hasil ini diharapkan menjadi dasar dalam upaya pengelolaan dan konservasi mangrove secara berkelanjutan di wilayah pesisir Bangkalan.

Kata Kunci: Mangrove, Struktur Komunitas, Kesehatan Mangrove, Indeks Kesehatan Mangrove (MHI), Desa Mlajah, Bangkalan.

ABSTRACT

This study aims to analyze the community structure and health of mangrove ecosystems in supporting the role of coastal ecology in Mlajah Village, Bangkalan Regency. The study was conducted from May to October 2025 using a quantitative descriptive method with a line transect and plot approach at four observation stations. The parameters observed included water quality (temperature, salinity, pH, and dissolved oxygen), species diversity, uniformity, dominance, and the mangrove health index (MHI) based on canopy cover, stem diameter, and number of stakes. The results showed that water quality at all stations was still within the standard range with a temperature of 28–29°C, salinity of 17–19 ppt, pH 7.6–8.0, and DO 3.1–4.9 mg/L. Nine mangrove species were found, namely *Rhizophora mucronata*, *R. stylosa*, *R. apiculata*, *Bruguiera gymnorrhiza*, *B. cylindrica*, *Sonneratia alba*, *Avicennia marina*, *A. alba*, and *Xylocarpus granatum*. Station 1 had moderate diversity ($H' = 1.5$), high evenness ($E = 0.93$), and low dominance ($C = 0.25$), indicating a more stable community compared to other stations. The MHI value indicated moderate health conditions at all stations, with the highest value at Station 2 (63.01%) and the lowest at Station 3 (56.49%). Overall, the mangrove ecosystem in Mlajah Village is classified as being in moderate to good condition, but several locations showed indications of environmental stress that could affect ecosystem regeneration and balance. These results are expected to be the basis for sustainable mangrove management and conservation efforts in the coastal area of Bangkalan.

Keywords: Mangrove, Community Structure, Mangrove Health, Mangrove Health Index (MHI), Mlajah Village, Bangkalan.