

ABSTRAK

Ekosistem mangrove Segara Anakan Barat luas dan strategis sebagai kawasan konservasi yang multifungsi, baik secara ekologis maupun ekonomi. Namun pelaksanaan pengelolaan di kawasan ini belum optimal ditandai dengan penurunan kualitas air dan karakteristik substrat akibat aktivitas alam dan antropogenik. Tujuan penelitian ini adalah untuk mengetahui kondisi kualitas air, karakteristik substrat, dan analisis lanskap berdasarkan zonasi kualitas air dan karakteristik substrat dengan kerapatan mangrove di ekosistem mangrove Segara Anakan Barat. Metode yang digunakan adalah metode survei yang terdiri dari 15 stasiun dengan jumlah masing-masing 3 plot pengamatan. Pada ekosistem mangrove Segara Anakan Barat diketahui di seluruh stasiun temperatur air berkisar antara 28 - 34,5°C; nilai pH air berkisar dari 5,05 - 7,19; dan tingkat salinitas air berkisar antara 13,5 - 26 ppt. Karakteristik substrat pada ekosistem mangrove Segara Anakan Barat diketahui bahwa nilai pH substrat berkisar antara 4,05 - 6 (asam); salinitas substrat berkisar dari 16,5 - 24 ppt; persentase kandungan pirit berkisar dari 0,96 - 1,85%; konsentrasi fosfat bervariasi antara 0,56 - 1,82 mg/100 g; dan tekstur tanah liat berlumpur. Analisis lanskap ekosistem mangrove Segara Anakan Barat diklasifikasikan berdasarkan kerapatan mangrove yaitu jarang, sedang, baik, dan sangat baik. Pola distribusi pada lanskap mangrove ini terbentuk secara kompleks dengan pola bercampur yang dipengaruhi oleh kondisi lingkungan seperti komposisi substrat, salinitas, serta pasang surut dan aktivitas antropogenik.

Kata Kunci : *karakteristik substrat; kerapatan mangrove; kualitas air; lanskap; Segara Anakan Barat.*

ABSTRACT

The mangrove ecosystem of West Segara Anakan is extensive and strategic as a multifunctional conservation area, both in ecological and economic aspects. However, the implementation of management in this area has not been optimal, indicated by a decline in water quality and substrate characteristics due to natural and anthropogenic activities. The purpose of this study was to determine the status of water quality, substrate characteristics, and landscape analysis based on water quality zoning and substrate characteristics with mangrove density in the West Segara Anakan Mangrove Ecosystem. The method used was a survey method, which consisted of 15 stations with a total of 3 plots in each station. In the West Segara Anakan Mangrove Ecosystem, all stations are known to have water temperature between 28-34.5°C, water pH between 5.05-7.19 and water salinity between 13.5-26 ppt. Substrate characteristics in the West Segara Anakan mangrove ecosystem showed that substrate pH values ranged from 4.05 - 6 (acidic); substrate salinity ranged from 16.5 - 24 ppt; percentage of pyrite content ranged from 0.96 - 1.85%; phosphate concentration ranged from 0.56 - 1.82 mg/100 g; and the substrate texture was silty clay. The landscape analysis of the West Segara Anakan mangrove ecosystem was classified as rare, moderate, dense and very dense based on water quality, substrate characteristics, and mangrove density. The distribution pattern in this mangrove landscape is complex, with a mixed pattern that is influenced by environmental conditions such as the composition of the substrate, salinity, and tides, and anthropogenic activities.

Keywords: *landscape; mangrove density; substrate characteristics; water quality; West Segara Anakan.*