

The Mangrove Landscape and Zonation following Soil Properties and Water Inundation Distribution in Segara Anakan Cilacap

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Abstract	<p>The mangrove zoning and landscape express the correlation between mangrove vegetation (density, biodiversity and species distribution) with environment factors like as water inundation, seaside, and soil properties. The research was conducted in Segara Anakan Lagoon to analysis community structure and mangrove landscape based on species distribution, biodiversity, environment factors, and mangrove zoning. The results showed that (a) Segara Anakan Lagoon had 4 mangrove zone's were dominated by <i>Sonneratia alba</i>, <i>Rhizophora mucronata</i>, <i>Avicennia marina</i>, <i>Rhizophora apiculata</i>, <i>Rhizophora stylosa</i>, and <i>Nypa frutican</i>; (b) the structure of ecosystem was showed by trend of mangrove ecosystem with equation $y = 35.34x^2 - 923.85x + 12817$ with $x = \text{time (year)}$ and $y = \text{mangrove area (ha)}$, mangrove density between 1333367 ind ha-1 (West Segara Anakan) and 899567 ind ha-1 (East Segara Anakan), dominated species were <i>Nypa frutican</i>, <i>Rhizophora stylosa</i>, <i>Rhizophora apiculata</i>, and <i>Aegiceras corniculatum</i> and mangrove biodiversity between 2,572,65 (moderate); (c) structure of environment factor showed single and semi double-type tides, water debit between 0.360.73 m s-1; water depth between 0.20-23.7 m and water inundation between 480cm; soil texture was clay and loam, soil nitrate of 1.5 mg 100 g-1, soil phosphate of 1.5 mg 100 g-1, C organic of 1.31%, soil pH of 6-7, and soil salinity of 6.5-10 ppt.</p>
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