

The distribution of mangrove area, mangrove density, and species diversity on the North Coast of Jakarta

Title	The distribution of mangrove area, mangrove density, and species diversity on the North Coast of Jakarta
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Abstract	<p>The distribution of mangrove area, density, and species diversity on the North Coast of Jakarta indicate the mangrove adaptation to live and grow in permanent water inundation areas. Therefore, this research aimed to analyze the distribution and mapping of the mangrove ecosystem in permanent water inundation area using the index of mangrove density, diversity, and geographical information system. The results showed that soil water salinity ranged from 5.6 to 7.0 ppt, water salinity ranged from 0.1 to 9.8 ppt, soil water pH ranged from 6.25 to 7.0, water pH ranged from 5.83 to 6.5, soil nitrate ranged from 12.2 to 22.8 mg/L, soil phosphate ranged from 1.7 to 14.8 mg/L, soil pyrite ranged from 0.12 to 0.3 mg/L, and soil texture varied from silt loam to silty clay loam. The mangrove ecosystem on the North Jakarta was dominated by a very rare density and low moderate diversity, with a density between 440–1,250 trees/ha. The distribution of mangrove area also showed a very rare density from 0.18 ha (2000) to 166.95 ha (2020), a rare from 197.03 ha (2000) to 359.72 ha (2020), the moderate from 263.65 ha (2000) to 351.09 ha (2020), the dense from 591.78 (2000) to 273.92 ha (2020), and the very dense from 486.35 ha (2000) to 98.91 ha (2020). The mangrove ecosystem in the North Coast Jakarta was dominated by <i>Avicennia marina</i>, <i>Rhizophora mucronata</i>, <i>Rhizophora apiculata</i>, <i>Rhizophora stylosa</i>, <i>Nypa fruticans</i>, <i>Sonneratia alba</i> and <i>Sonneratia caseolaris</i>. The conclusions of this research showed that the mangrove ecosystem in Jakarta is degraded because it is dominated by rare- very rare of mangrove density. Keywords: mangrove distribution, mangrove density and diversity, North Coast of Jakarta, permanent water inundation</p>
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