

## Mangrove landscaping using the modulus of elasticity and rupture properties to reduce coastal disaster risk

<b>Publons ID</b>	21917394
<b>Wos ID</b>	WOS:000449894500008
<b>Doi</b>	10.1016/j.ocecoaman.2018.08.002
<b>Title</b>	Mangrove landscaping using the modulus of elasticity and rupture properties to reduce coastal disaster risk
<b>First Author</b>	Hilmi, Endang
<b>Last Author</b>	
<b>Authors</b>	
<b>Publish Date</b>	NOV 1 2018
<b>Journal Name</b>	OCEAN & COASTAL MANAGEMENT
<b>Citation</b>	5
<b>Abstract</b>	<p>Hazards in coastal areas such as tsunamis, abrasion and sea level rise may cause ecosystem degradation, building damage, and human death. One strategy to mitigate the possible impacts of such risks is to design mangrove landscaping. This design uses the wood properties of modulus of elasticity (MoE), modulus of rupture (MoR), and other properties. MoE and MoR reflect the strength of wood to reduce the impact of hydrodynamic forces in coastal areas. The destructive method was used to analyze the MoE and MoR of mangrove trees from two stations (West Segara Anakan and East Segara Anakan), which have 20 sampling plots (size 10 m x 10 m) as replicates for each station. The results showed that mangrove species have MoE score ranging from 50.000 kg cm<sup>(-3)</sup> to 171.802 kg cm<sup>(-3)</sup> and MoR score ranging from 400 kg cm<sup>(-3)</sup> to 1503.44 kg cm<sup>(-3)</sup>. Accordingly, mangrove landscaping design in West and East Segara Anakan based on MoE and MoR properties were proposed with the following classes: class 1 <i>Rhizophora apiculata</i> and <i>Bruguiera parviflora</i>, class 2 <i>B. gymnorhiza</i>, <i>B. sexangula</i>, <i>R. stylosa</i> and <i>R. mucronata</i>, class 3 <i>Avicennia alba</i>, <i>Sonneratia alba</i>, <i>Xylocarpus granatum</i> and <i>X. moluccensis</i> and class 4 <i>Nypa frutican</i> and <i>Casuarina equisetifolia</i>.</p>
<b>Publish Type</b>	Journal
<b>Publish Year</b>	2018
<b>Page Begin</b>	71
<b>Page End</b>	79
<b>Issn</b>	0964-5691
<b>Eissn</b>	1873-524X
<b>Url</b>	<a href="https://www.webofscience.com/wos/woscc/full-record/WOS:000449894500008">https://www.webofscience.com/wos/woscc/full-record/WOS:000449894500008</a>
<b>Author</b>	Dr ENDANG HILMI, S.Hut, M.Si