

Application RS and GIS for Monitoring Presence Mangrove Forest as Function for Decreasing Impact of Salt Water Flood

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Application of Remote Sensing and GIS for Monitoring
the Presence of Mangrove Forest as the Function for Decreasing Impact of Salt Water Flood
In Coastal Area and Swamp Area
(Case Study in North Jakarta)

Abstract

Salt water flood is one of disaster happened in a coastal area or swamp area caused by human or nature. It is kind of flood happened caused by the raising of sea level or tidal wave. But the salt water flood had other factors that influenced. Other factors that influenced the salt water flood are rainfall, watershed relief, watershed morphology, discharge and depth of watershed, the change of land use and presence of natural levee made by Mangrove Forest.

The presence of Mangrove Forest became one of an important thing to decrease area of salt water flood impact, because the presence of Mangrove could hold back the tidal waves of salt water. However, this present age is pruning of the Mangrove Forest and then used the products for development and industry needed, and then that situation would make the presence of Mangrove Forest become decreased.

This research aims is find the relationship between presence of Mangrove Forest with the salt water flood or tidal wave flood. In other hand, these researches also decide the potential area was grown by Mangroves for decreasing the impact of salt water flood. This research used remote sensing method and GIS digital analysis with geomorphological approach. Materials indeed for this research are multi temporal remote sensing image data for indicated Mangroves Forest distribution and monitoring. There are some correlation between area impact of salt water flood with area of Mangroves Forest, that could be indicated by remote sensing.

Keywords: Salt water flood/tidal waves flood, Mangroves, Geography Information System and Remote Sensing, North Jakarta

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