

**ENVIRONMENTAL SENSITIVITY INDEX  
IN THE COASTAL AREA CAUSED BY OIL SPILLS  
AT THE TELUK PENYU BEACH AND PORT OF TANJUNG INTAN,  
CILACAP, CENTRAL JAVA PROVINCE**

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*ABSTRACT***

The coastal area can be environment impacted such as an oil spill incident. Oil spill impacts will affect coastal ecosystems include: prevent the photosynthetic processes, decreasing aesthetic value, the death of organism which is sensitive to oil pollution, and the loss of livelihoods. The purpose of this research are : (1) knowing the great value sensitivity of coastal environments will experience an oil spill pollution, (2) knowing the dominant factor affecting the condition of the coastal oil spill, (3) Determine priorities the protection of coastal areas.

The initial phase of the study conducted by survey method for determining the observation point value of the sensitivity of coastal environment. The observation point of considering the environmental sensitivity of coastal land use maps, google earth image based on the vulnerability component, the value of conservation and social value. Environmental Sensitivity Indeks (IKL) is calculated by multiplying the degree of vulnerability, habitat value, and social value. Components of the vulnerability is obtained from the value of oceanography, the slope of beach, the beach substrate type, and depth of waters. Habitat value is based on ecological water conservation, and social value is a significant value. The value of the sensitivity of coastal environment known based on the interpretation, digitization, direct in the field observations and calculations. Natural factors is more dominant effect on condition of coastal obtained from the analysis and then described. The value of coastal ESI (Environmental Sensitivity Index) used as the basis for determining of the direction and technical management for oil spill response at the Teluk Penyuh beach.

The result showed that the coastal area of Teluk Penyuh beach have a sensitivity level of sensitive zone I (not sensitf) of 77,90 hectares and zone II (less sensitive) of 29,23 hectares. Natural factors that influence ESI, the value is coastal characteristics and place significant value. Based on technical management for preventing of oil spill that can be applied in study area (1) The revitalization of residential area away to shoreline, (2) Prioritizing area which are vulnerable to contamination and then providing tools such as oil boom to minimize spread of oil spill.

**Keywords: Coastal area, environmental sensitivity index, sensitive, prevention, oil spill, revitalization.**