

Potential Harmful Algal Blooms (HABs) in Segara Anakan Lagoon, Central Java, Indonesia

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Abstract	<p>Segara Anakan Lagoon (SAL), located along side of southern coast on western part of Central Java 108 degrees 46'-109 degrees 05'E; 7 degrees 34'-7 degrees 48'S. SAL is necessarily ecosystem as nursery ground. This has been becoming important research relating to primary productivity. The existence of antropogenical activities around the area, is changing inrush input into lagoon. This is going to be worried about giving influences in physical, chemistry, and biological factors of the water and causing deflation in rate value of primer productivity. Rainy and dry season's variability with important impacts on the phytoplankton community structure, abundance and dynamics. Furthermore, the number of coastal ecosystems with identified eutrophication symptoms is increasing worldwide due to the increasing anthropogenic pressures. One of the first symptoms of eutrophication is enhanced phytoplankton biomass. Generally, Fitoplanton is important biological indicators in the process. However, high abundance of biomass phytoplankton could give harmful effect toward lagoon, they could produce toxic substances that will be accumulated, it can be endangering. The aim of the research is to determine and calculate potential species of Harmful Algal Blooms (HABs) in SAL with spastial and temporal approach. The spatial approach is done at seven different stations of ecological characteristics SAL, with representations: natural factors and the presence of antropogenical activities. On the temporal approach (time series) for a year, it refers to the monsoon wind pattern, which are called season (western, the transitional season 1, eastern, and the transitional season 2). The results of laboratory tests are discussed descriptively. Phytoplankton sample were taken vertically using plankton nets, meshsize 25 mu m. The result showed that SAL have been found and consisted of 82 species from 5 division phytoplankton: Chrysophyta, Chlorophyta, Cyanophyta, Pyrophyta, and Euglenophyta. 20 species from 9 genus were identified potential as HABs, with four genus of them were known having toxin and endangering for human (Nitzschia, Oscillatoria, Anabaena dan Protoperidinium). Whether, five genus do not produce toxins but giving deflation Oxygen of waters with anoxia condition (Chaetoceros, Coscinodiscus, Rhizosolenia, Thalassiosira, Thalassiotrix). The highest of HABS abundance is dominated during the transitional season II. On the spatial approach, antropoeogenic characteristics station contribute to the whole height of HABs. Influence of rainfall, spatially, antropogenical pressure, and hydrodinamical wates causing enhancement of HABs potency.</p>
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