

## Coral bleaching : mekanisme pertahanan karang terhadap stress

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### Abstrak

Coral reef bleaching is a phenomenon of fading due to a variety of stress, both natural and human impact. These circumstance leads to the degeneration and loss of zooxanthellae in coral tissue The phenomenon of coral bleaching can be occurred locally and globally. Based on the historical record, the largest coral bleaching occurred in 1997-1998. Contributing factors to the coral bleaching are extreme temperature changes, metals, other pollutants (nitrates), slow water movement, light intensity and salinity. Zooxantellae (algae symbiont) is much more affected in the certain conditions, especially in the photosynthesis process. Defensive mechanisms against the pressure on zooxantellae can be defined as Npq, fluorescent pigments, oxidation enzymes and genetic variation. Changing in reproductive patterns, species composition and community structure can be happened after bleaching phenomenon. In the future, monitoring of Seawater Surface Temperature (SST), research on the types of stress and tolerant mechanisms of algae symbiont, including pigments, proteins, enzymes oxidation, genetics in both laboratory and field are needed.