

As summer approach and sea water temperatures are rising rapidly, the possibilities of coral bleaching events like the one we suffer last year increases. Coral bleaching is the whitening of corals, due to stress-induced expulsion or death of their symbiotic protozoa. The corals that form the structure of the reef ecosystem of tropical seas depend upon a symbiotic relationship with this unicellular organism, called zooxanthellae. Zooxanthellae give coral its coloration.

Under stress, corals may expel their zooxanthellae, which leads to a lighter or completely white appearance, hence the term "bleached".

According to the NOAA Coral Reef Watch monitoring system, coral bleaching is likely in the Caribbean in 2011. With temperatures above-average, NOAA's models show a strong potential for bleaching in the southern and southeastern Caribbean that could be as severe as in 2010

We just receive from NOAA the first Coral Bleaching Alert for the 2011 season. Coral Bleaching Alerts are delivered when the sea water temperature exceeds the Maximum Monthly Mean (MMM) of Sub Surface Temperature (SST) at the site. We call that condition a "Hot Spot". The stress produced by a Hot Spot over the coral is measured in Degree Heating Weeks (DHW). One DHW equals 1°C over the MMM for one week, 0.5°C for two weeks or any other combination. Our DHW for the last season was 9.9 which correspond to the highest Bleaching Alert Level

Definitions of Alert Levels:

No Stress: No thermal stress (HotSpot \leq 0)

Watch: Low-level thermal stress ($0 < \text{HotSpot} < 1$)

Warning: Thermal stress is accumulating ($\text{HotSpot} \geq 1$ and $0 < \text{DHW} < 4$)

Alert Level 1: Bleaching expected ($\text{HotSpot} \geq 1$ and $4 \leq \text{DHW} < 8$)

Alert Level 2: Significant bleaching expected ($\text{HotSpot} \geq 1$ and $\text{DHW} \geq 8$)

Our MMM is 28.5°C and the present temperature is 29°C since June 9, 2011 meaning Bleaching Watch. For more information about NOAA Coral Bleach Watch please log into <http://coralreefwatch.noaa.gov>

Be aware that coral reefs under these conditions are highly vulnerable to external factor and most care should be giving specially to oil, detergents and other chemical spills. Please exercise outmost care during boat refueling and avoid washing boats or deck with detergents or other chemicals. Also, corals are more susceptible to illness by losing their protecting mucus by abrasion. Please practice and promote good buoyancy skills in order to diminish contact with coral heads. Management actions to reduce stress can be applied

Report bleaching at marinepark@stinapa.org. We will keep you updated.

NOAA Coral Reef Watch Satellite Coral Bleaching Alert Area
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