



Mote Marine Laboratory / Florida Keys National Marine Sanctuary
Coral Bleaching Early Warning Network
Current Conditions Report #20130701



Updated July 1, 2013

Summary: Based on climate predictions, current conditions, and field observations, the threat for mass coral bleaching within the FKNMS remains **LOW**.

NOAA Coral Reef Watch Coral Bleaching Alert Area
 June 29, 2013 (experimental)

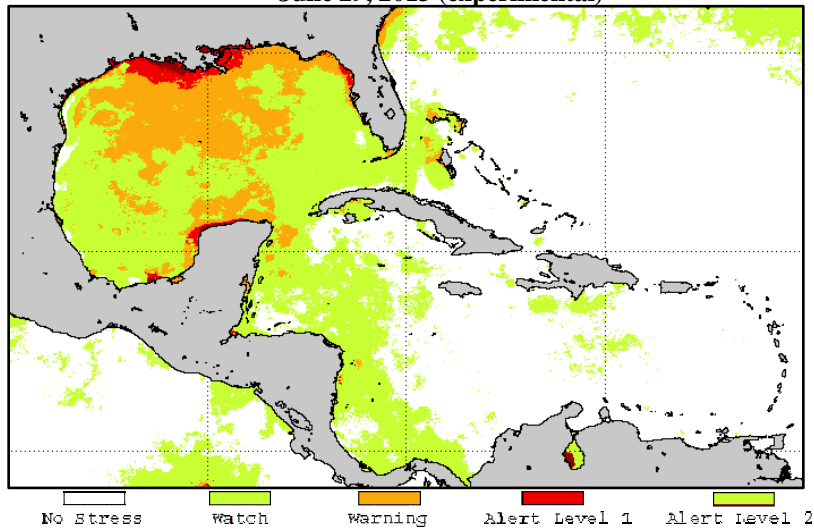


Figure 1. NOAA's 5 km Experimental Coral Bleaching Alert Areas for June 29, 2013.
<http://coralreefwatch.noaa.gov/satellite/bleaching5km>

Weather and Sea Temperatures

According to the latest NOAA Coral Reef Watch (CRW) experimental 5 kilometer (km) Satellite Coral Bleaching Alert Area, there is currently a low level of thermal stress throughout the Florida Keys; however, there is potential for coral bleaching if current conditions worsen (Fig. 1).

Current remote sensing analysis by NOAA's CRW program indicates that the Florida Keys region is experiencing limited thermal stress. NOAA's recent experimental 5 km Coral Bleaching HotSpot Map (Fig.2), which illustrates current sea surface temperatures compared to the average temperature for the warmest month, shows only slightly elevated temperatures for the Florida Keys. Similarly, NOAA's latest experimental 5 km Degree Heating Weeks (DHW) map, which indicates how much heat stress has built up over the past 12 weeks (Fig.3), shows no accumulated temperature stress in the Florida Keys region. Finally, NOAA's Integrated Coral Observing Network (ICON) monitoring stations confirms that sea temperatures throughout the Florida Keys, at least along the outer reef tract, are still holding below 30°C (Fig.4); perhaps due in part to breezy conditions observed during this time frame (Fig 5). *In-situ* sea temperature data is currently not available for Sand Key or Sombrero Reef. Similarly Dry Tortugas station is not recording any data at this time.

Mote Marine Laboratory will continue to monitor the NOAA HotSpot maps, DHW maps, and ICON sea temperature data from NOAA monitoring stations on a weekly basis for the remainder of the bleaching season.

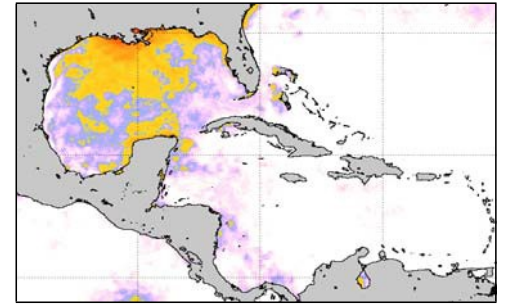


Figure 2. NOAA's Experimental 5km Coral Bleaching HotSpot Map for June 29, 2013.
<http://coralreefwatch.noaa.gov/satellite/bleaching5km>

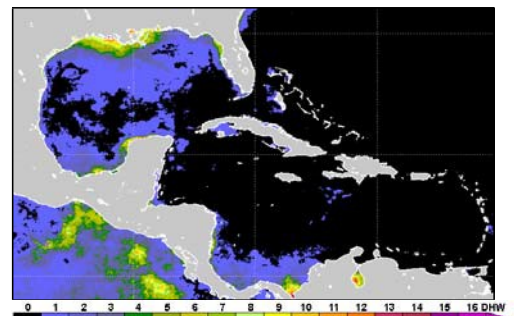


Figure 3. NOAA's Experimental 5km Degree Heating Weeks Map for June 29, 2013.
<http://coralreefwatch.noaa.gov/satellite/bleaching5km>

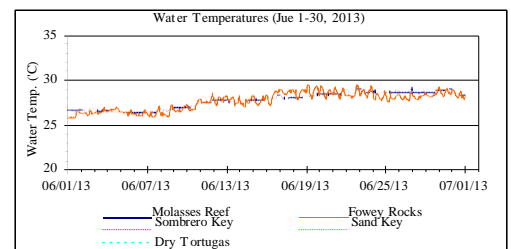


Figure 4. *in-situ* sea temperature from NOAA/ICON monitoring stations (June 1-30, 2013).

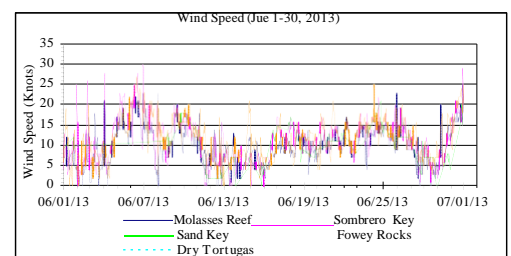


Figure 5. Wind speed data from NOAA/ICON monitoring stations (June 1-30, 2013).



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Observer Network Training



Figure 7. Paling *Siderastrea siderea*, next to a healthy *Colpophyllia natans* at a patch reef offshore of Big Pine Key on June 27, 2013.
 Photo: MMI

A total of 41 BleachWatch Observer reports were received during the month of June (Fig. 6), with 7 reports indicating isolated colonies exhibiting signs of paling. The remaining 34 reports indicated that no significant signs of coral bleaching were observed. At those sites where partial bleaching or paling was noted, the overall percentage of corals exhibiting signs of thermal stress was only 1-10% of corals at each site. The majority of isolated paling observations consisted of Encrusting/Mound/Boulder corals (Fig. 7). Other observations included paling of *Palythoa spp.* (Fig. 8) and several reports of coral disease.



Figure 8. Paling *Palythoa sp.* at a reef offshore of Key West on June 20, 2013.
 Photo: Lauren Uslin

These isolated observations of paling and partial bleaching do not necessarily indicate the onset of a mass bleaching event; however, continued field observations are needed as more widespread coral bleaching could develop if environmental conditions continue to be favorable.

BleachWatch Reports for June 1-30, 2013

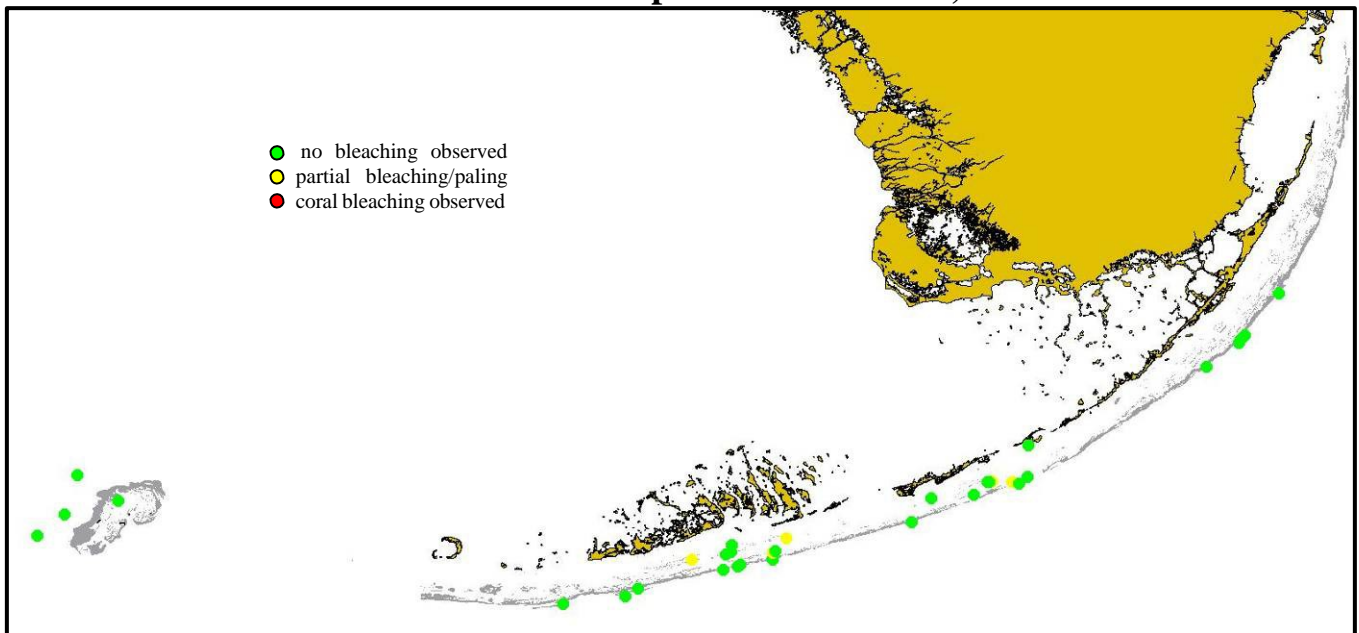


Figure 6. Overview of BleachWatch observer reports submitted from June 1-30, 2013.

**For more information about the BleachWatch program,
 or to submit a bleaching observation, contact:**

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<http://www.mote.org/Keys/research/bleaching.phtml>

FUNDING THANKS TO....

