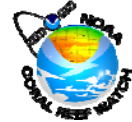




NOAA's Response to the 2005 Caribbean Bleaching Event



A major coral bleaching event occurred in the Caribbean in 2005, and has resulted in significant coral death in much of the region. NOAA Coral Reef Watch first alerted managers and scientists about possible bleaching conditions in the Florida Keys in August 2005, and issued warnings for both Puerto Rico and the US Virgin Islands (USVI) in October 2005. Anomalously warm water was centered around the northern Antilles near the USVI and Puerto Rico; thermal stress reached Degree Heating Week (DHWs) values of over 15 at some locations (Figure 1). Corresponding with these alerts, reports of coral bleaching have come in from much of the Caribbean (Figure 2); this is clearly an important, widespread event.

The US Coral Reef Task Force (USCRTF) passed a resolution at its November meeting in Palau to mobilize efforts across the Caribbean to monitor and assess short- and long-term impacts of the 2005 warming and bleaching event. The USCRTF Bleaching Committee has coordinated the efforts of NOAA, NASA, and DOI personnel, as well as other federal agencies, NGO partners, and local managers. The outcomes of the initial meetings include the development of a 3-phase response approach including an initial response, near-term reporting and assessment, and long-term monitoring.

As part of the initial response, a workshop was held in the US Virgin Islands, hosted by NOAA and The Nature Conservancy. Over 40 marine park managers and coral reef scientists from USVI, Puerto Rico, the British Virgin Islands, and the French West Indies attended. The workshop was highly successful in coordinating the ongoing regional response to the unprecedented 2005 bleaching event in the Caribbean.

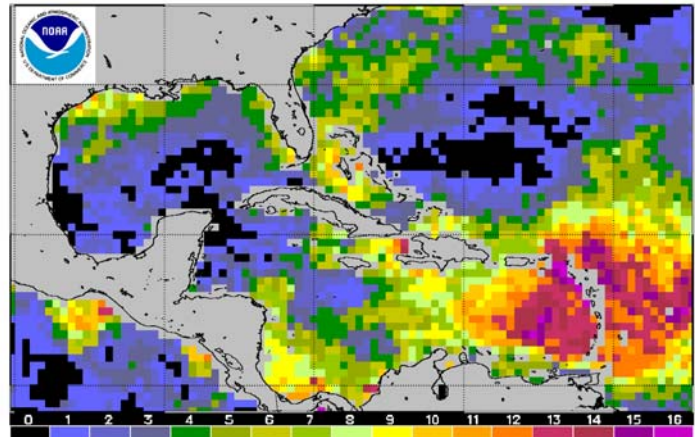


Figure 1: 2005 annual composite of maximum Degree Heating Weeks. Each DHW represents one week of temperatures 1°C above the maximum highest monthly average. Values of 4 result in bleaching; 8 results in mass bleaching and mortality.

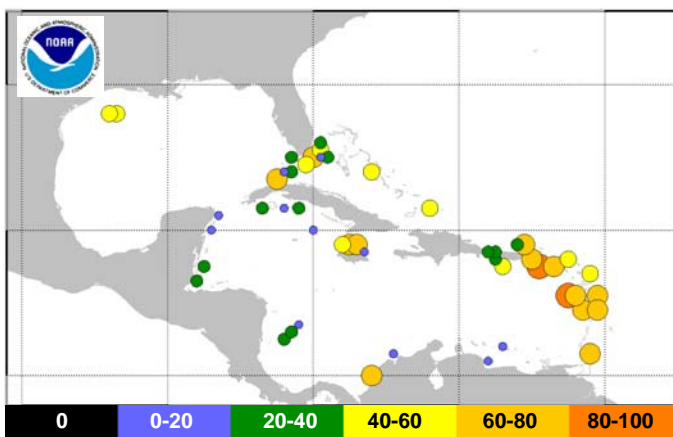


Figure 2: Percentage of coral colonies bleached by Caribbean satellite pixel.

Participants from USVI and Puerto Rico have committed to meet, form regional teams, draft response plans outlining the geographical responsibilities of each researcher/field team, and develop a plan of action (from funding to field activities to outputs) before bleaching occurs again.

As part of the near-term response, NOAA is leading an international collaborative effort to fully document the extent of the event. Preliminary results of more than 1500 bleaching surveys from 100 researchers in 25 jurisdictions indicate severe bleaching throughout the eastern Caribbean (Figure 2), with over 25% mortality due to bleaching in a few locations.

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