

Pacific Climate Update

Coral Bleaching Thermal Stress Analysis and Seasonal Guidance through November 2016

(Released August 3, 2016)

Current conditions:

NOAA Coral Reef Watch's (CRW) near-real-time satellite monitoring shows sea surface temperature (SST) anomalies are near average in the eastern equatorial Pacific with negative anomalies persisting in the central equatorial Pacific (Figure 1). The western Pacific is experiencing above average temperatures especially around the areas of Guam and the Commonwealth of the Northern Mariana Islands (CNMI), Palau, and the Federated States of Micronesia. ENSO-neutral conditions remain; however La Niña conditions are expected to develop between August and October. A positive SST anomaly is also present off the western coast of Mexico, in the region of Baja California.

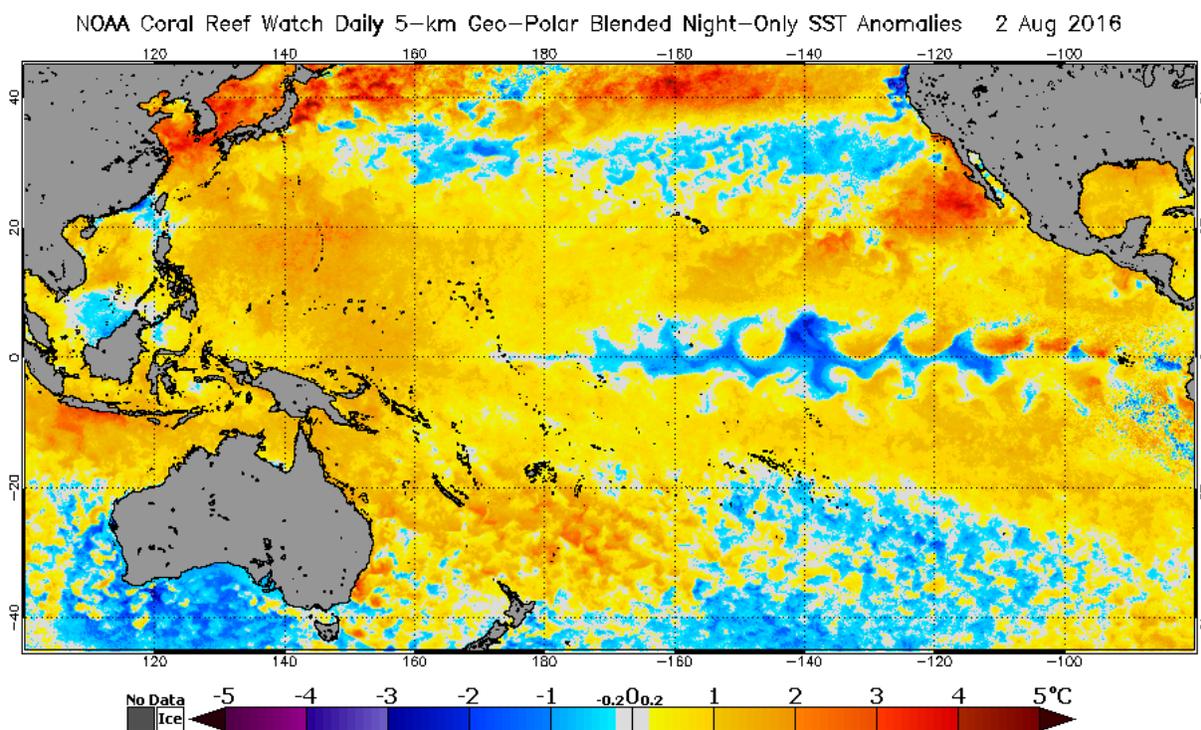


Figure 1: NOAA Coral Reef Watch's Satellite Sea Surface Temperature (SST) Anomaly product for the Pacific region.

HotSpots are mainly restricted to the northern hemisphere with temperatures reaching bleaching thresholds near the Federated States of Micronesia, Guam and CNMI, the Philippines, and the western coast of Mexico (Figure 2). The reefs of CNMI have reached Alert Level 1 and are expected to ramp up to Alert Level 2 in August (Figure 3). Hainan Island, China and Dongsha Island, Taiwan are now at Alert Level 2. The Ryukyu Islands have reached Alert Level 1 along with locations in the Philippines and Vietnam (Figure 3). Reports of bleaching from Guam and from Saipan (CNMI) have already begun as temperatures in the region have increased to 31°C. Taiwan, Vietnam, the Ryukyu Islands, and the Philippines have all reported recent bleaching as well.

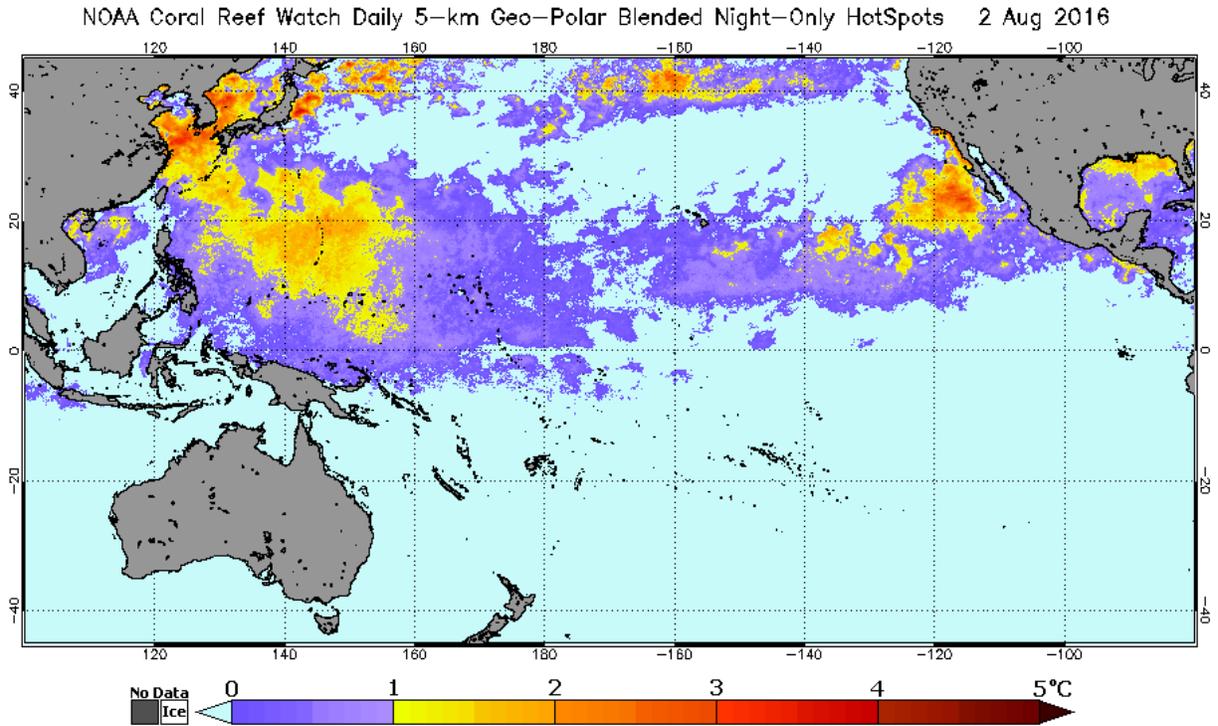


Figure 2: NOAA Coral Reef Watch's Satellite Coral Bleaching HotSpot product for the Pacific region.

NOAA Coral Reef Watch Daily 5-km Geo-Polar Blended Night-Only Bleaching Alert Area 7d Max 2 Aug 2016

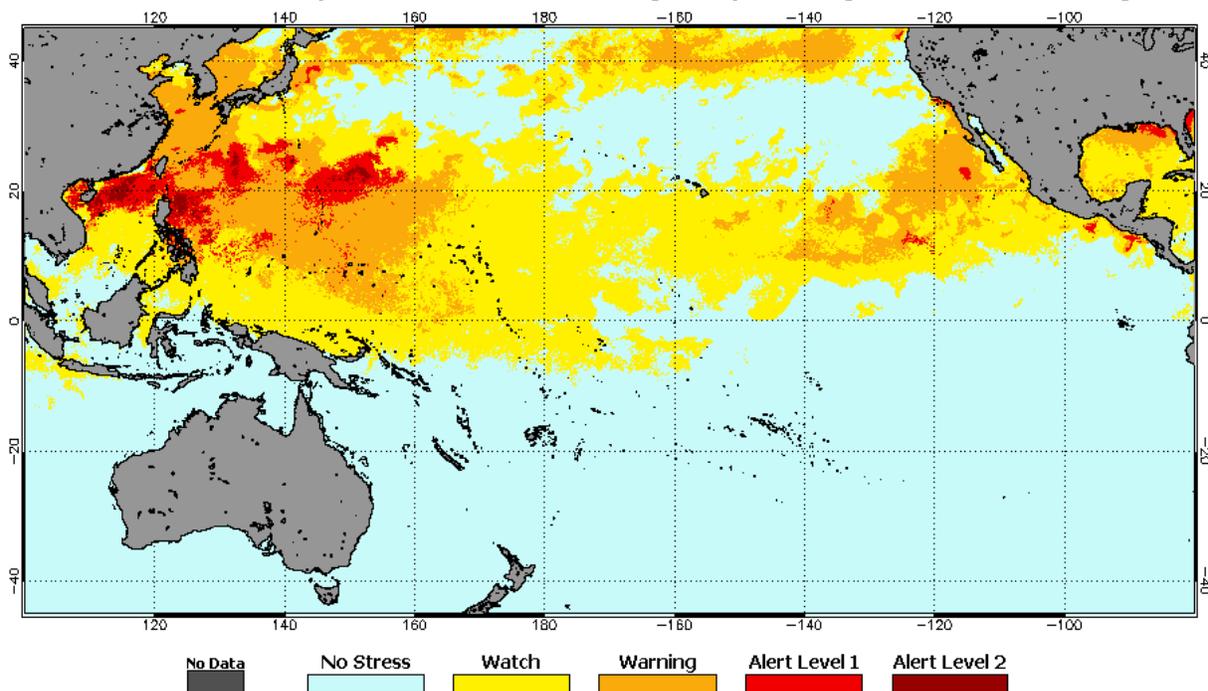


Figure 3: NOAA Coral Reef Watch's Satellite Bleaching Alert Area (7-day maximum) product for the Pacific region.

CRW's most recent Four-Month Bleaching Outlook (Figure 4) projects continued thermal stress in the western Pacific Ocean through November 2016. Waters extending from the Ryukyu Islands south to Papua New Guinea are expected to maintain at least Alert Level 1 with Guam, CNMI, and the easternmost parts of the Federated States of Micronesia reaching Alert Level 2 in the near future. The Main Hawaiian Islands may see Alert Level 1 conditions around October. Hainan Island, China and Dongsha Island, Taiwan are expected to remain at Alert Level 2 throughout August 2016.

2016 Aug 2 NOAA Coral Reef Watch 60% Probability Coral Bleaching Thermal Stress for Aug–Nov 2016
Experimental, v3.0, CFSv2–based, 28–member Ensemble Forecast

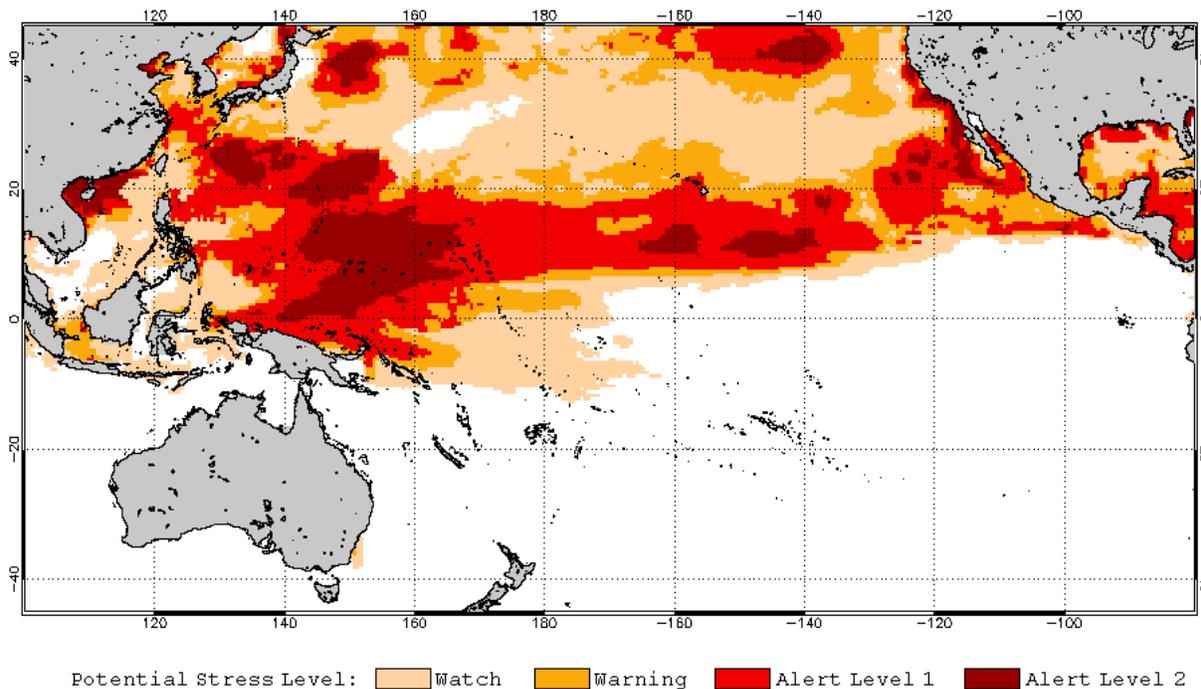


Figure 4: NOAA Coral Reef Watch's Four-Month Coral Bleaching Thermal Stress Outlook for August–November 2016 for the Pacific region.

NOTE: This report focuses on NOAA Coral Reef Watch's new [5-km satellite-based coral bleaching thermal stress products](#) and v3.0 [Four-Month Coral Bleaching Thermal Stress Outlook](#). The 5-km satellite products presented here use CRW's new color scales, which are already implemented in the images posted on the [CRW website](#).

To monitor the intensity and location of coral bleaching thermal stress, please follow NOAA CRW's satellite monitoring and Outlook closely in the coming weeks at:

<http://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php> and

http://coralreefwatch.noaa.gov/satellite/bleachingoutlook_cfs/outlook_cfs.php.

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