

Pacific Climate Update Coral Bleaching Heat Stress Analysis and Seasonal Guidance through November 2018

(Released August 6, 2018)

Current conditions:

NOAA Coral Reef Watch's (CRW) [near real-time satellite monitoring](#) shows mildly above-average sea surface temperatures (SSTs) in much of the western tropical Pacific Ocean, with the highest anomalies (not exceeding 2°C) surrounding the eastern Federated States of Micronesia (FSM) and the Marshall Islands (Figure 1). Additional warm anomalies in the Pacific Ocean are farther north in the East China Sea, the Sea of Japan, in the open ocean to the east of Japan's main islands, and in the eastern Pacific Ocean off the coast of Mexico. Near-average SSTs are predominantly in the central equatorial Pacific Ocean around the Phoenix Islands, Kiribati and reaching eastward to the Marquesas Islands. Patches of below-average SSTs are present in the eastern equatorial Pacific Ocean. In the northern Pacific Ocean around the Hawaiian Archipelago, the Northwestern Hawaiian Islands are experiencing average to slightly below-average SSTs, while bands of spatially alternating above- and below-average SSTs are affecting the southern Main Hawaiian Islands (Figure 1). El Niño Southern Oscillation (ENSO)-neutral conditions continued through June 2018, as indicated by slightly above-average SSTs across the central and eastern equatorial Pacific. The NOAA National Centers for Environmental Prediction's ENSO Alert System predicts [ENSO-neutral](#) conditions through Northern Hemisphere summer 2018 with the likelihood of an El Niño thereafter.

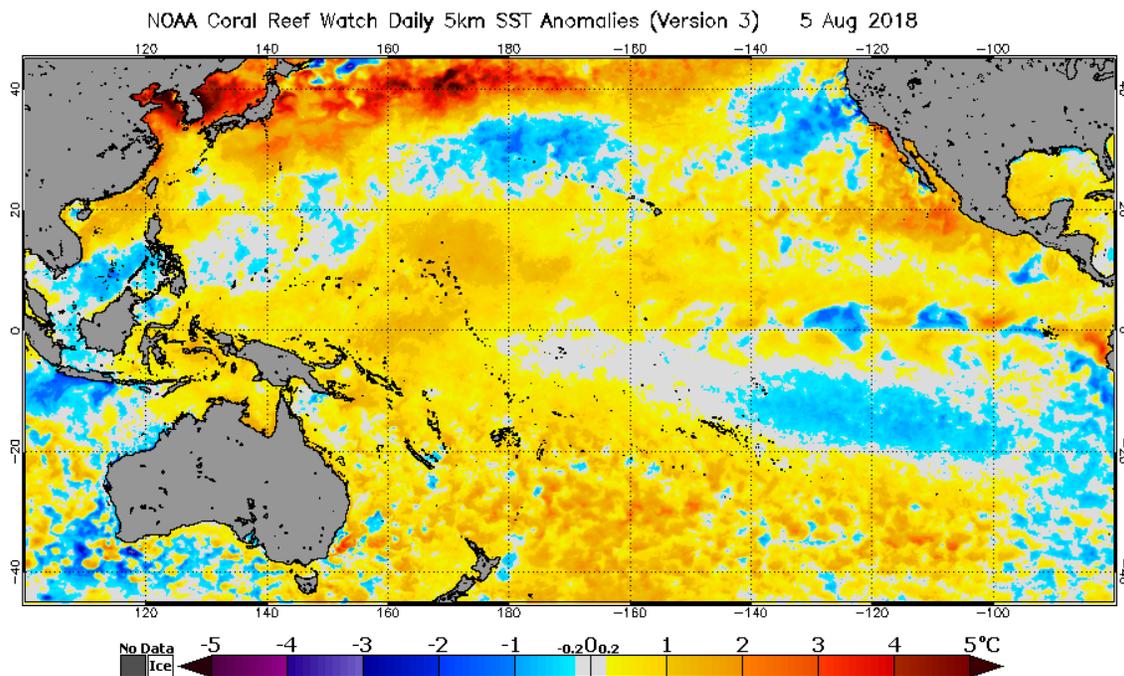


Figure 1. NOAA Coral Reef Watch's Satellite Sea Surface Temperature Anomaly product for the Pacific region.

In recent months, HotSpots reached just above 1°C in many western Pacific islands, with the exception of the South China Sea, East China Sea and Sea of Japan, which are experiencing unusually warm waters (Figure 2). As a result, the current bleaching status for Hong Kong, China is Alert Level 2, and the Paracel Islands, China; Dongsha, Taiwan; and the Northern Philippines are at Alert Level 1 (Figure 3). The Ogasawara Islands, Taiwan and Southern Ryukyu Islands, Japan are at a Bleaching Warning, and the rest of the Pacific remains at a Bleaching Watch or No Stress (Figure 3).

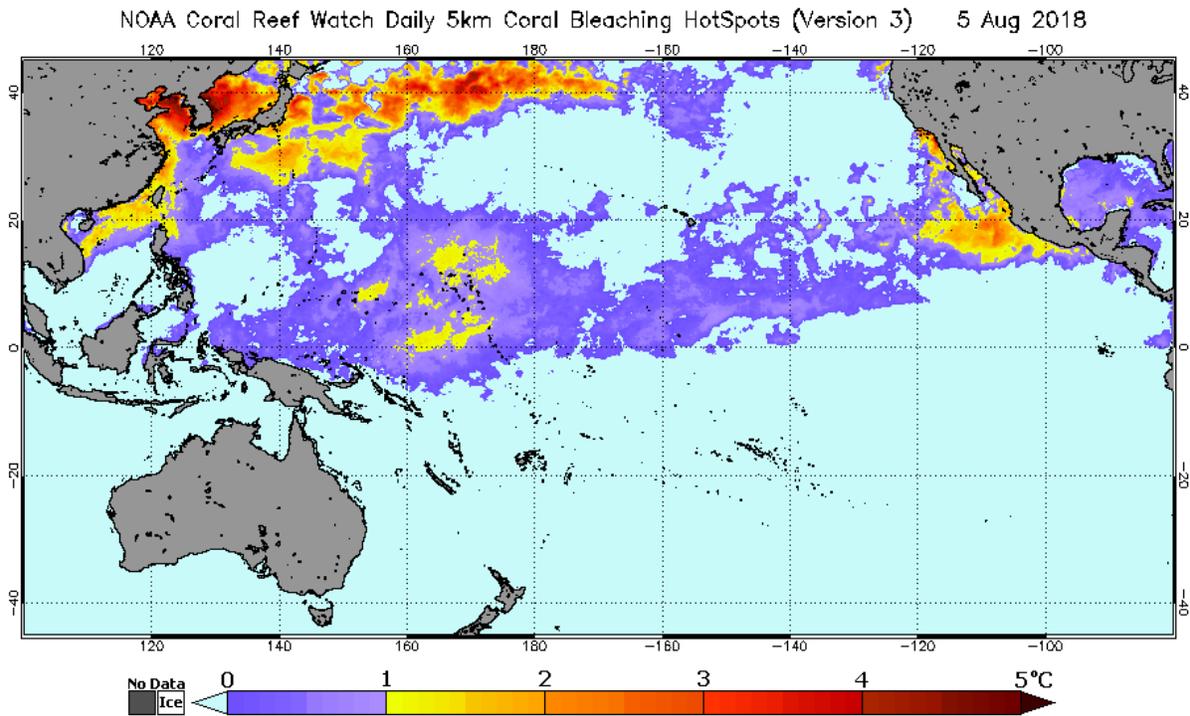


Figure 2. NOAA Coral Reef Watch's Satellite Coral Bleaching HotSpot product for the Pacific region.

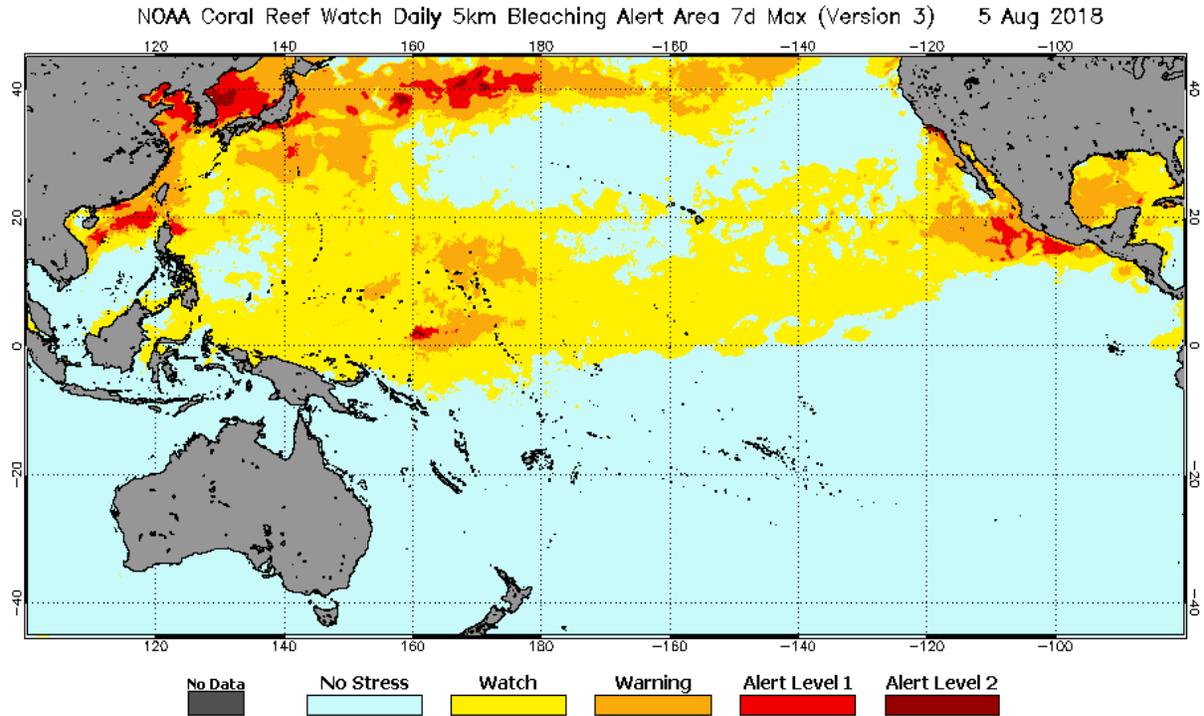


Figure 3. NOAA Coral Reef Watch's Satellite Bleaching Alert Area (7-day maximum) product for the Pacific region.

CRW's most recent [Four-Month Coral Bleaching Outlook](#) (Figure 4) projects continued heating (to Alert Level 1 and even Level 2 in sub-regions) in the western Pacific around the Marshall Islands as well as in the Northern Line Islands around Howland and Baker and in the Main Hawaiian Islands by October 2018. The Federated States of Micronesia are expected to remain at a Bleaching Watch throughout this period. The East China Sea and Sea of Japan are expected to remain anomalously warm until October. The eastern Pacific along the coast of the United States and Mexico is predicted to stay anomalously warm until November. Minimal bleaching is expected throughout the rest of the Pacific, however, due to the continued absence of heat stress since northern hemisphere winter.

2018 Jul 31 NOAA Coral Reef Watch 60% Probability Coral Bleaching Heat Stress for Aug–Nov 2018
 Experimental, v5.0, CFSv2–based, 28 to 112 Ensemble Members

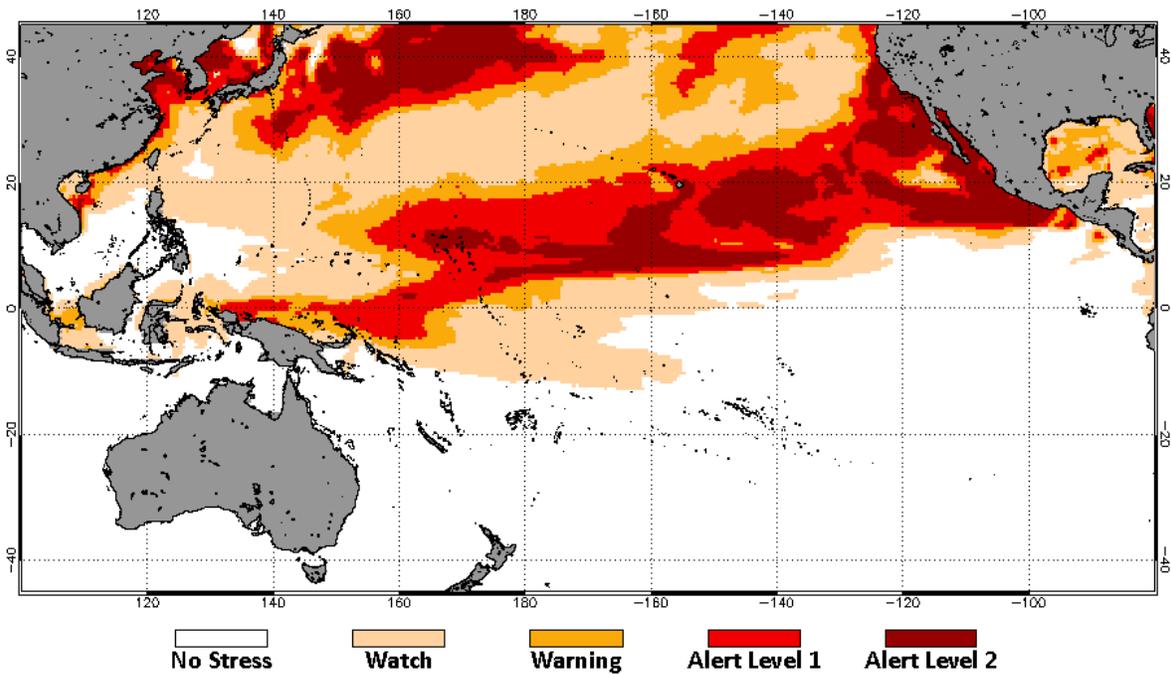


Figure 4. NOAA Coral Reef Watch's Four-Month Coral Bleaching Heat Stress Outlook of July 31, 2018 for the period August–November 2018 for the Pacific region.

NOTE: This report incorporates NOAA Coral Reef Watch's Version 3.0 (or v3) [5km satellite-based coral bleaching heat stress products](#) and v5 [Four-Month Coral Bleaching Heat Stress Outlook](#).

To monitor the intensity and location of bleaching heat stress in your coral reef region of interest, please follow NOAA Coral Reef Watch's satellite monitoring and outlooks closely in the coming weeks: <https://coralreefwatch.noaa.gov/satellite/bleaching5km/index.php> and https://coralreefwatch.noaa.gov/satellite/bleachingoutlook_cfs/outlook_cfs.php.

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