

Pacific Climate Update

Coral Bleaching Heat Stress Analysis and Seasonal Guidance through June 2021

(Released March 3, 2021)

Current conditions:

NOAA Coral Reef Watch's (CRW) [near real-time satellite monitoring](#) shows the sea surface temperature (SST) as being predominantly below-average along the equator in the eastern and central equatorial Pacific Ocean; below-average in the southeast Pacific and northeast Pacific between 0 °N and 20 °N latitude; and above-average throughout the remainder of the ocean basin (Figure 1). SST anomalies remained 1-2 °C above normal for most of December 2020 around Hawaii, Fiji, American Samoa, and Guam. In January and February 2021, temperatures were average to slightly below-average for Fiji and American Samoa, but remained above average around Hawaii and Guam. The [El Niño-Southern Oscillation \(ENSO\) Alert System](#) status (as of February 11, 2021) remains at La Niña Advisory. A majority of the models predict a transition to ENSO-neutral conditions during Northern Hemisphere spring 2021 (about 60% chance).

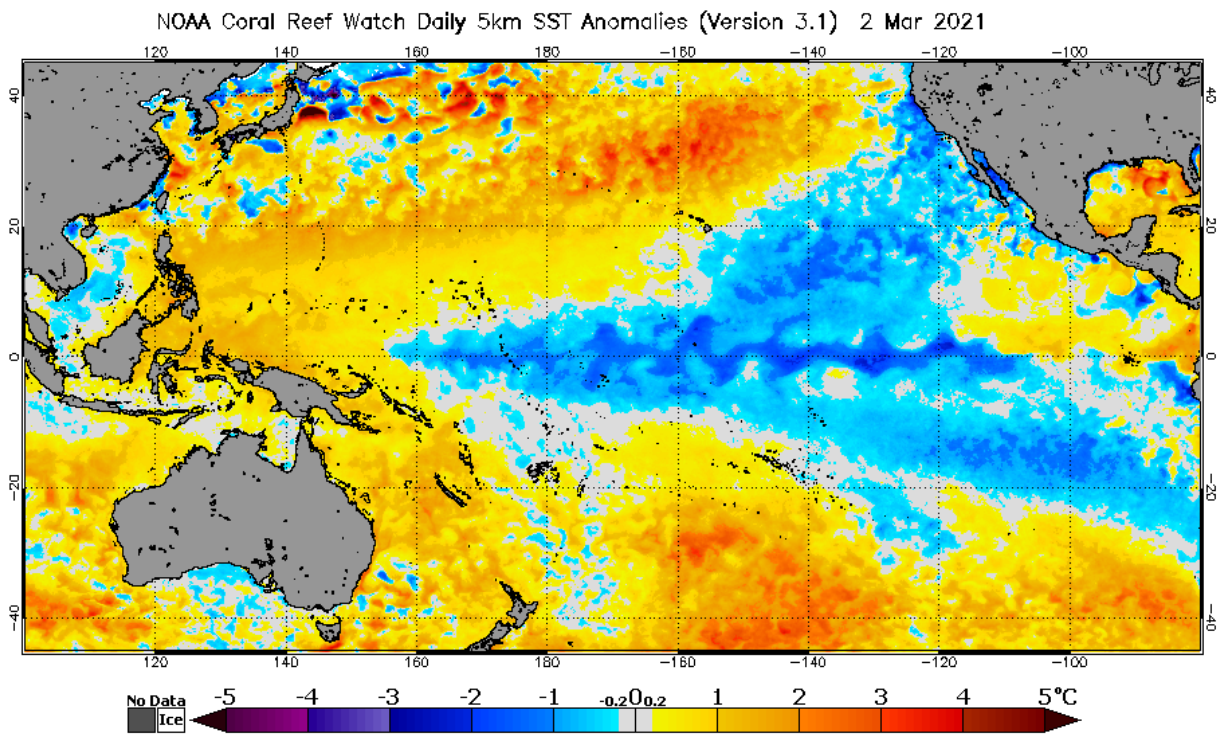


Figure 1. NOAA Coral Reef Watch's Satellite Sea Surface Temperature (SST) Anomaly product for the Pacific region.

Coral Bleaching HotSpots reached about 1 °C around Fiji in January but remained below 1 °C in all other locations east of Vanuatu (Figure 2). From January to February 2021, heat stress around Fiji decreased from Bleaching Warning to Bleaching Watch; it remains at Bleaching Watch. Since December 2020, American Samoa has been at Bleaching Watch, with minimal chance of coral bleaching. Hawaii and Guam are at no threat of coral bleaching at this time (Figure 3). The highest bleaching alerts are concentrated from east of the Great Barrier Reef, Australia to Vanuatu, between 5 °S and 25 °S latitude.

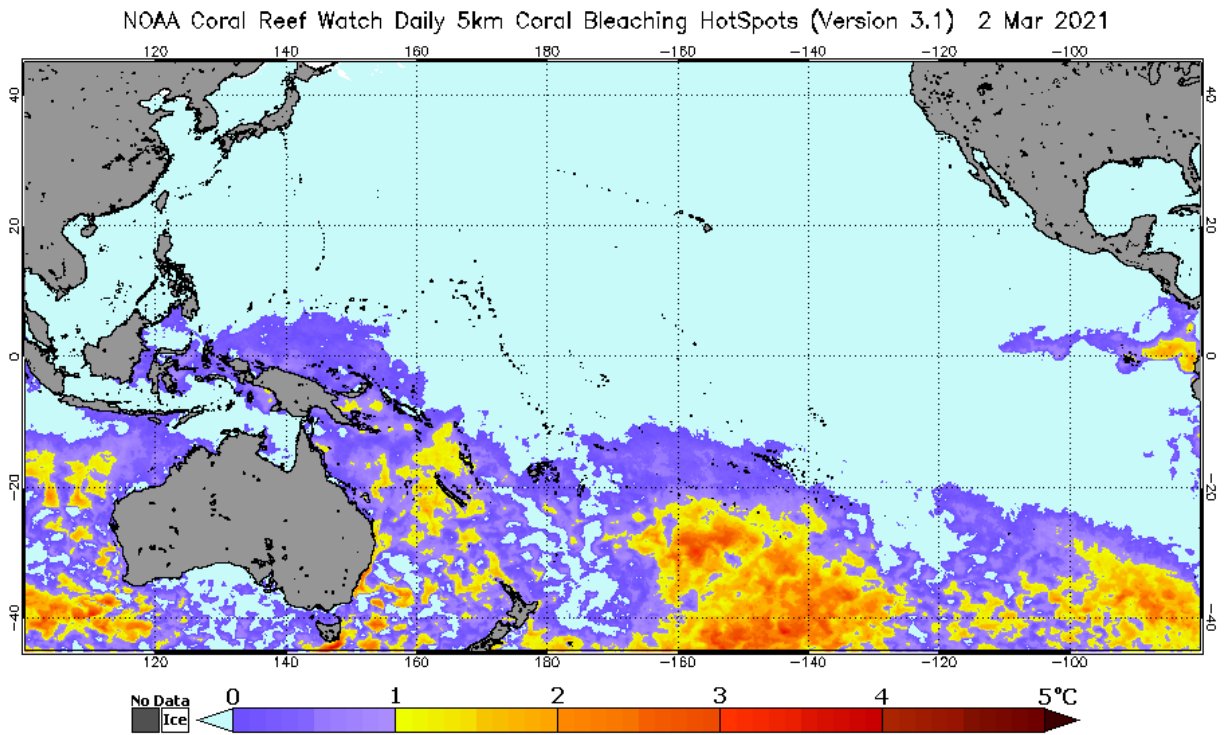


Figure 2. NOAA Coral Reef Watch's Satellite Coral Bleaching HotSpot product for the Pacific region.

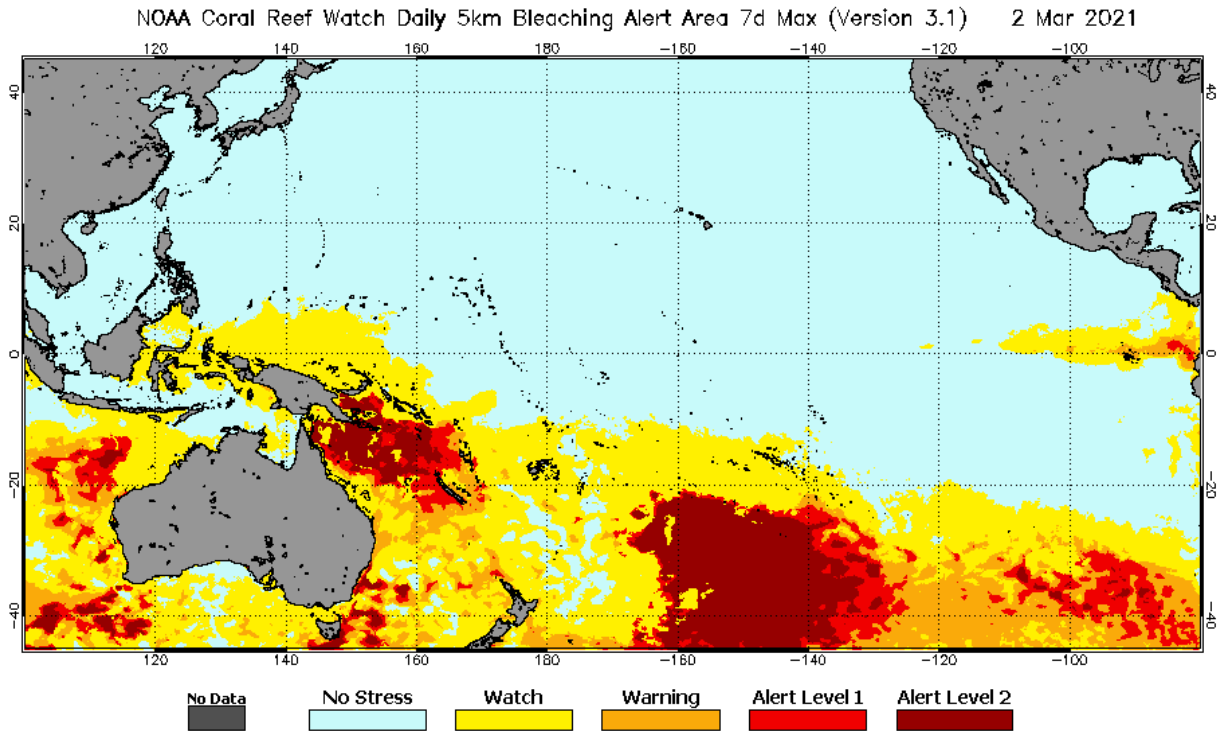


Figure 3. NOAA Coral Reef Watch's Satellite Bleaching Alert Area (7-day maximum) product for the Pacific region.

CRW's most recent [Four-Month Coral Bleaching Outlook](#) (Figure 4) projects heat stress will elevate to Bleaching Alert Level 1 around American Samoa in May 2021 and around the Gilbert Islands and Phoenix Islands, Kiribati in June 2021.

2021 Mar 2 NOAA Coral Reef Watch 60% Probability Coral Bleaching Heat Stress for Mar–Jun 2021
 Experimental, v5.0, CFSv2-based, 28 to 112 Ensemble Members

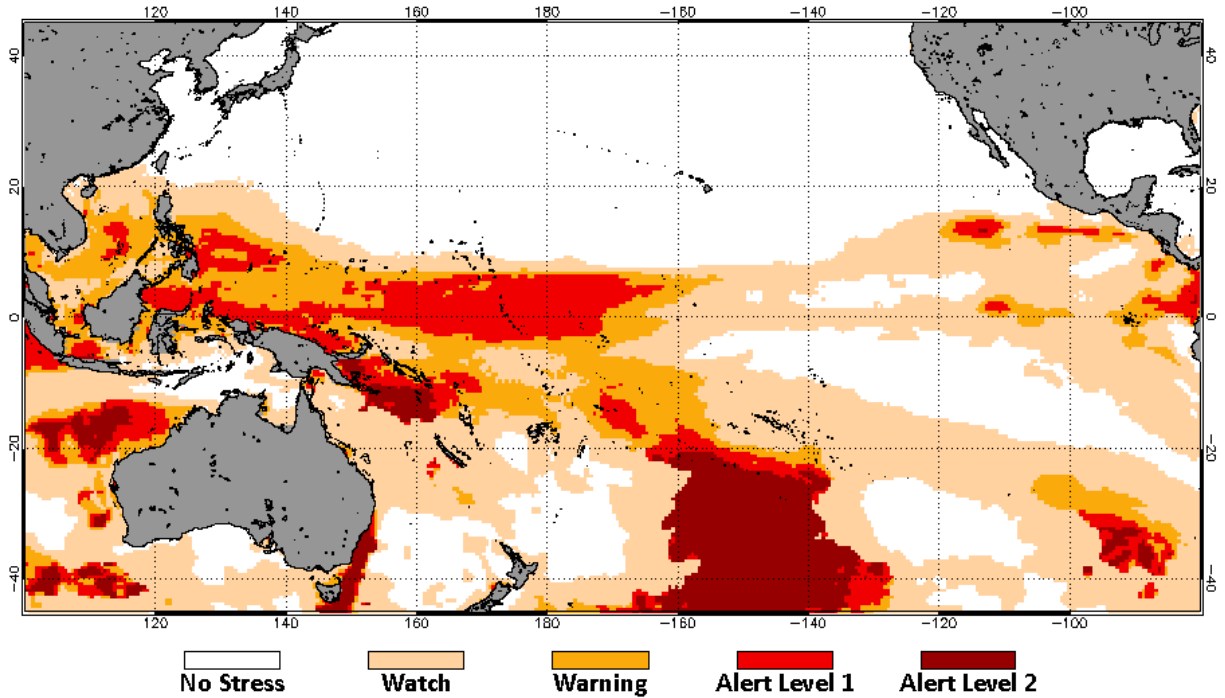


Figure 4. NOAA Coral Reef Watch's Four-Month Coral Bleaching Outlook of March 2, 2021 for the period March–June 2021 for the Pacific region.

*****NOTE: This report incorporates NOAA Coral Reef Watch's Version 3.1 (or v3.1) [5km satellite-based coral bleaching heat stress products](#) and v5 [Four-Month Coral Bleaching Outlook](#).*****

To monitor the intensity and location of heat stress in your coral reef region of interest, please follow NOAA Coral Reef Watch's satellite monitoring and modeled outlooks closely in the coming weeks: <https://coralreefwatch.noaa.gov/product/5km/index.php> and https://coralreefwatch.noaa.gov/satellite/bleachingoutlook_cfs/outlook_cfs.php.

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