

Pacific Climate Update

Coral Bleaching Heat Stress Analysis and Seasonal Guidance through June 2022

(Released March 2, 2022)

Current conditions:

NOAA Coral Reef Watch's (CRW) [near real-time satellite monitoring](#) shows the sea surface temperature (SST) as being predominantly below-average across most of the equatorial Pacific Ocean, which is consistent with the ongoing La Niña. Below-average SSTs weakened during January 2022, though anomalies stayed negative across most of the east-central and eastern equatorial Pacific (Figure 1). SST anomalies remain above-average in areas of the western Pacific, as a strong Pacific Decadal Oscillation (PDO) pattern continues, surrounding Guam, the Federated States of Micronesia, Palau, and Papua New Guinea (PNG). As of February 10, 2022, the NOAA National Centers for Environmental Prediction's (NCEP) [El Niño-Southern Oscillation \(ENSO\) Alert System](#) remains at La Niña Advisory. La Niña is likely to continue into Northern Hemisphere spring (77% chance during March-May) and then transition to ENSO-neutral (56% chance during May-July 2022).

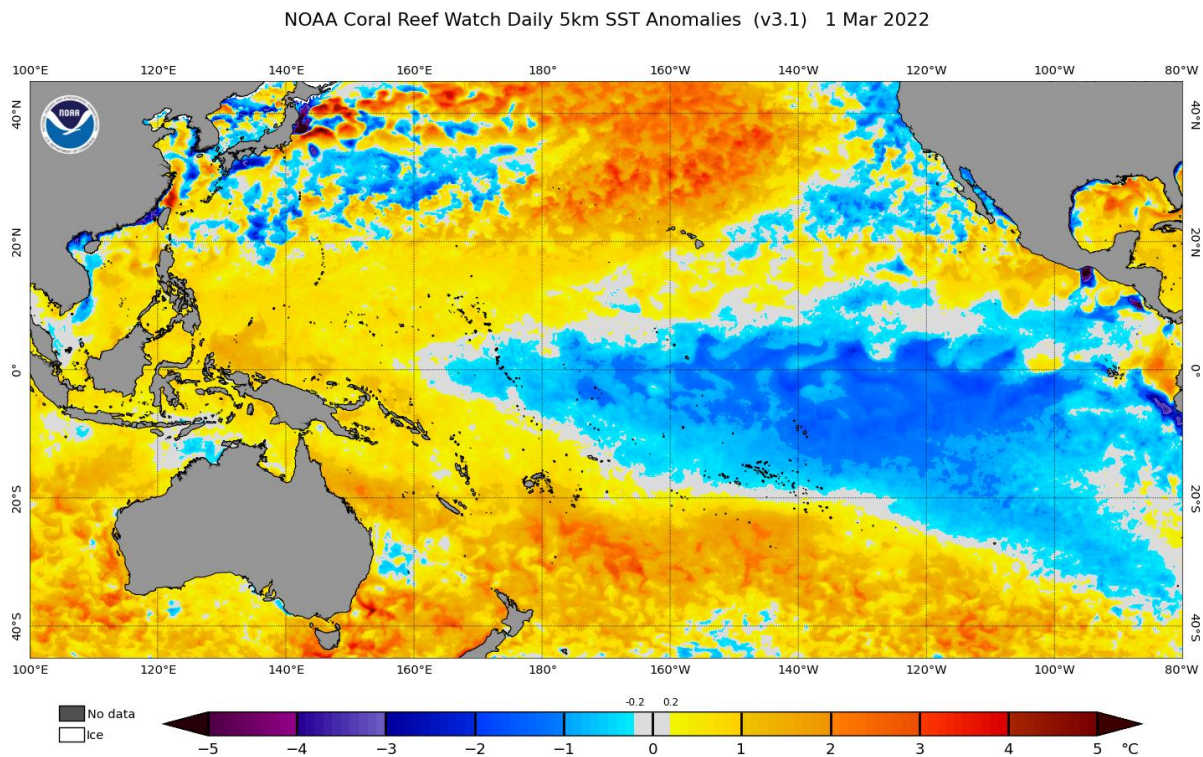


Figure 1. NOAA Coral Reef Watch's Satellite Sea Surface Temperature (SST) Anomaly product for the Pacific region.

Over the past three months, Coral Bleaching HotSpots have remained absent from much of the Northern Hemisphere. Regions where HotSpots are above 1°C are focused in the southern Pacific, around PNG, the Great Barrier Reef (GBR) in Australia, and Fiji (Figure 2). Portions of the GBR, New Caledonia, and PNG have reached [Bleaching Alert Level 2](#); Vanuatu, Southern Tonga and the Austral Islands have reached [Alert Level 1](#) (Figure 3). Local partners in Australia have reported multiple instances of coral bleaching on the GBR. Though Fiji is currently under a [Bleaching Watch](#), in-water surveys conducted at the beginning of the bleaching season, in January 2022, reported minor bleaching.

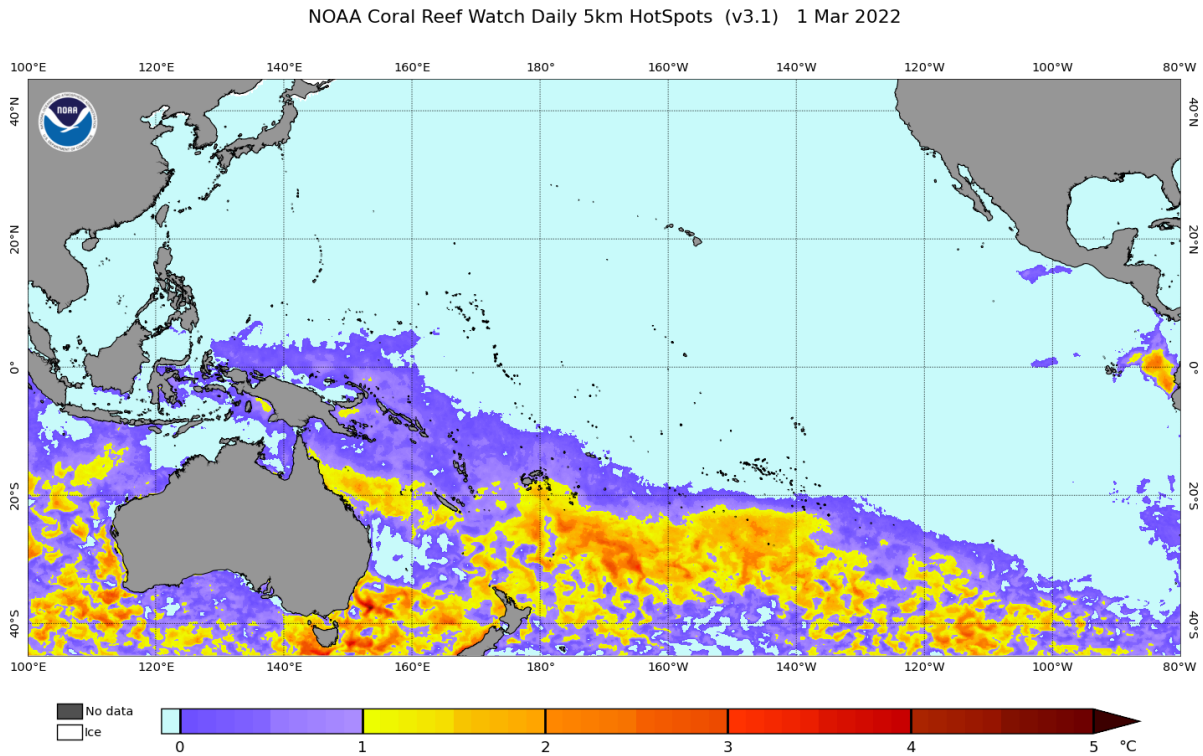


Figure 2. NOAA Coral Reef Watch's Satellite Coral Bleaching HotSpot product for the Pacific region.

NOAA Coral Reef Watch Daily 5km Bleaching Alert Area 7-day Maximum (v3.1) 1 Mar 2022

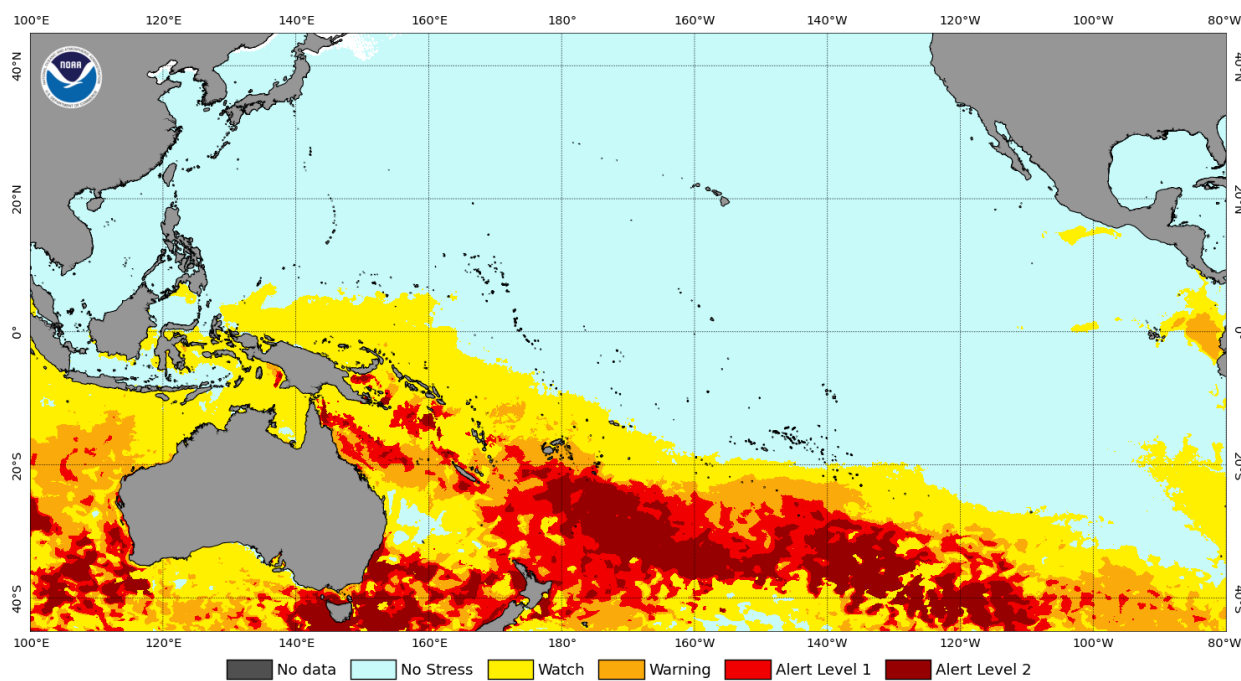


Figure 3. NOAA Coral Reef Watch's Satellite Bleaching Alert Area (7-day maximum) product for the Pacific region.

CRW's most recent [Four-Month Coral Bleaching Outlook](#) (Figure 4) projects heat stress will dissipate from much of the southern Pacific Ocean by May 2022. CRW expects heat stress on the GBR will continue over the next 4-8 weeks. Fiji also may experience an increase in heat stress to [Alert Level 1](#) before the region cools by May 2022.

2022 Mar 1 NOAA Coral Reef Watch 60% Probability Coral Bleaching Heat Stress for Mar–Jun 2022
 Experimental, v5.0, CFSv2-based, 28 to 112 Ensemble Members

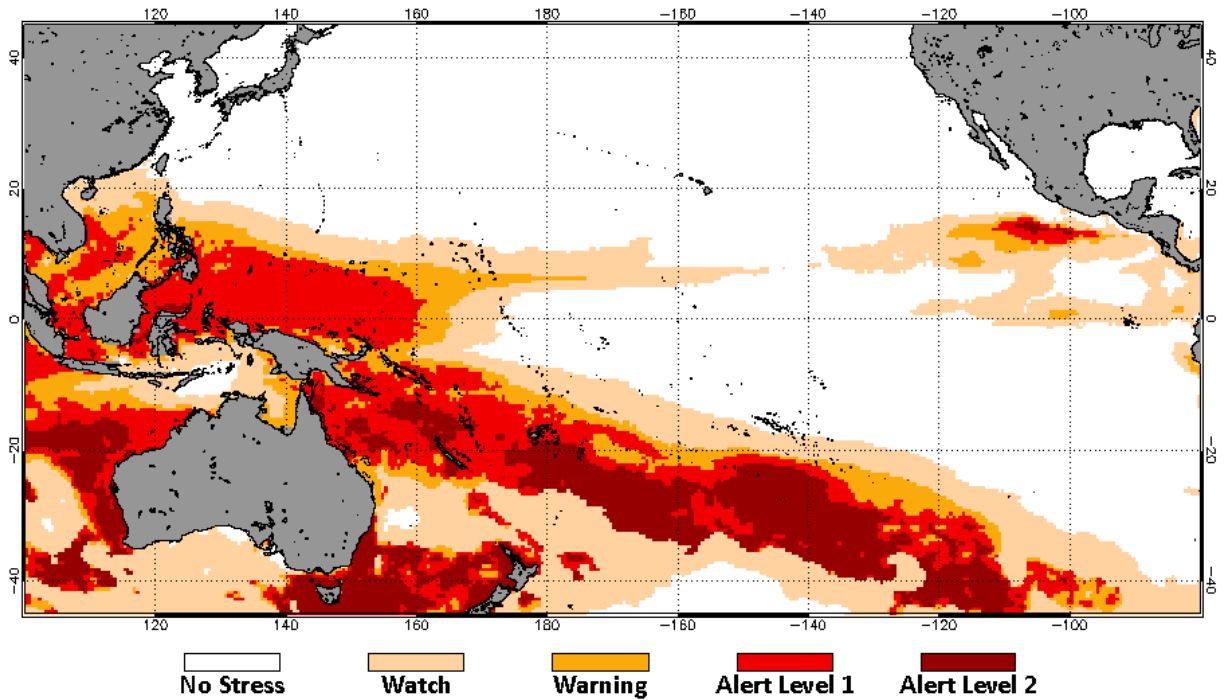


Figure 4. NOAA Coral Reef Watch’s Four-Month Coral Bleaching Outlook of March 1, 2022, for the period March–June 2022 for the Pacific region.

NOTE: We recommend that users continue to monitor updates in the Four-Month Outlook predictions (https://coralreefwatch.noaa.gov/satellite/bleachingoutlook_cfs/index.php), for their regions of interest/concern, over the months ahead, along with the changes in coral bleaching heat stress detected by our near real-time satellite products (<https://coralreefwatch.noaa.gov/product/5km/index.php>).

Program Partners:

