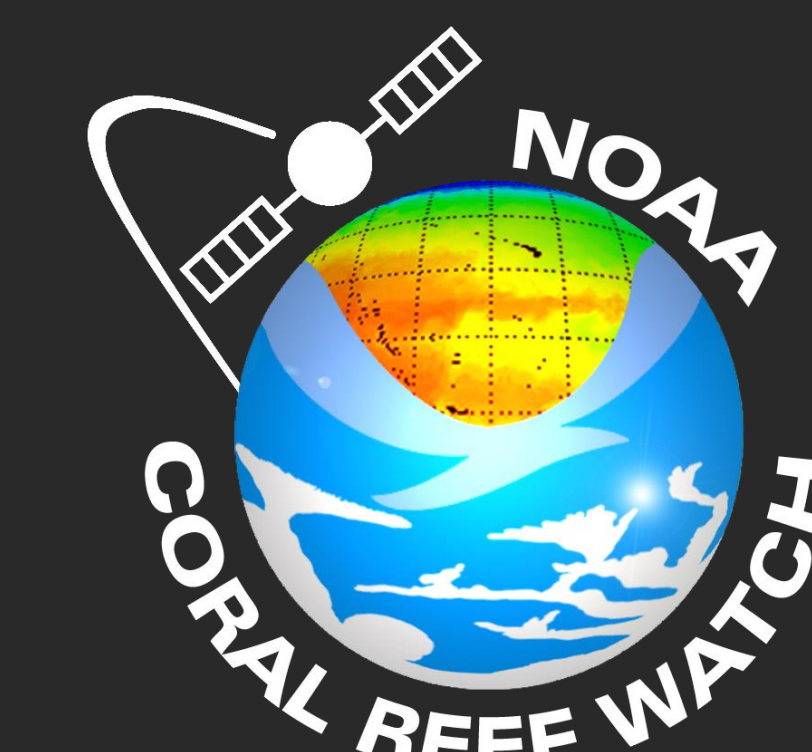


Addressing User Demands: Enhancing NOAA Coral Reef Watch's Satellite Decision Support System for Coral Reef Managers

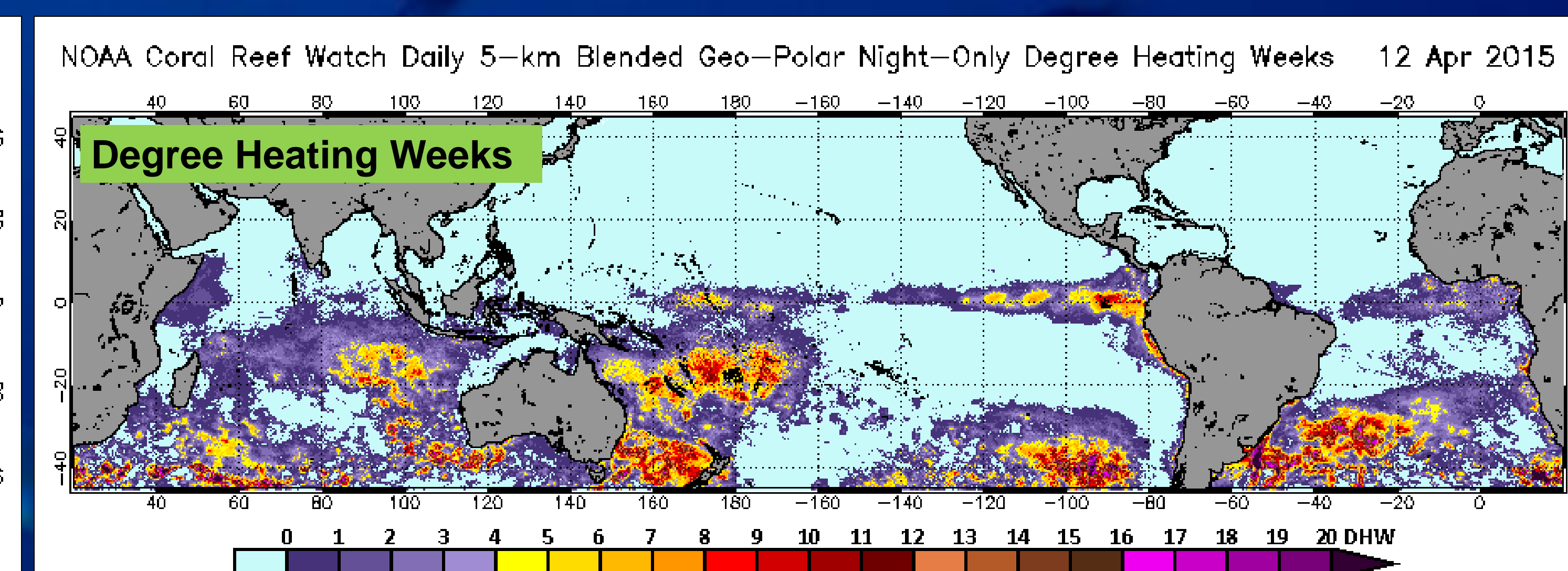
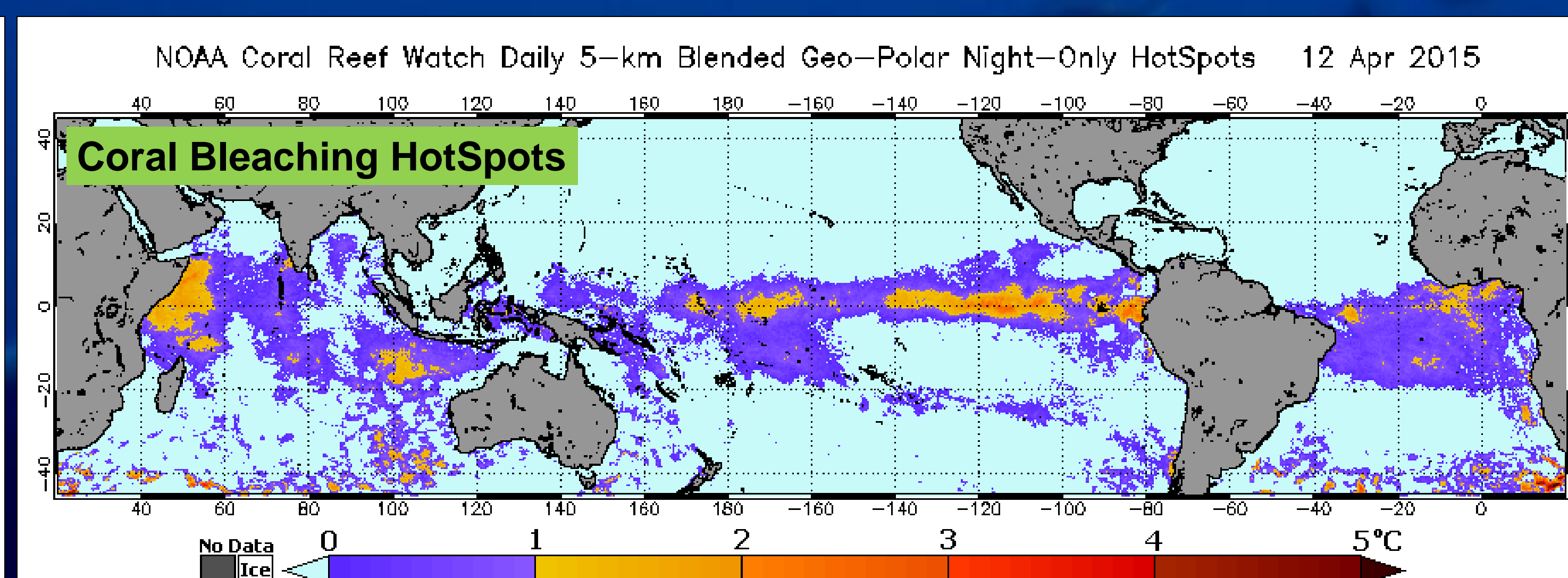
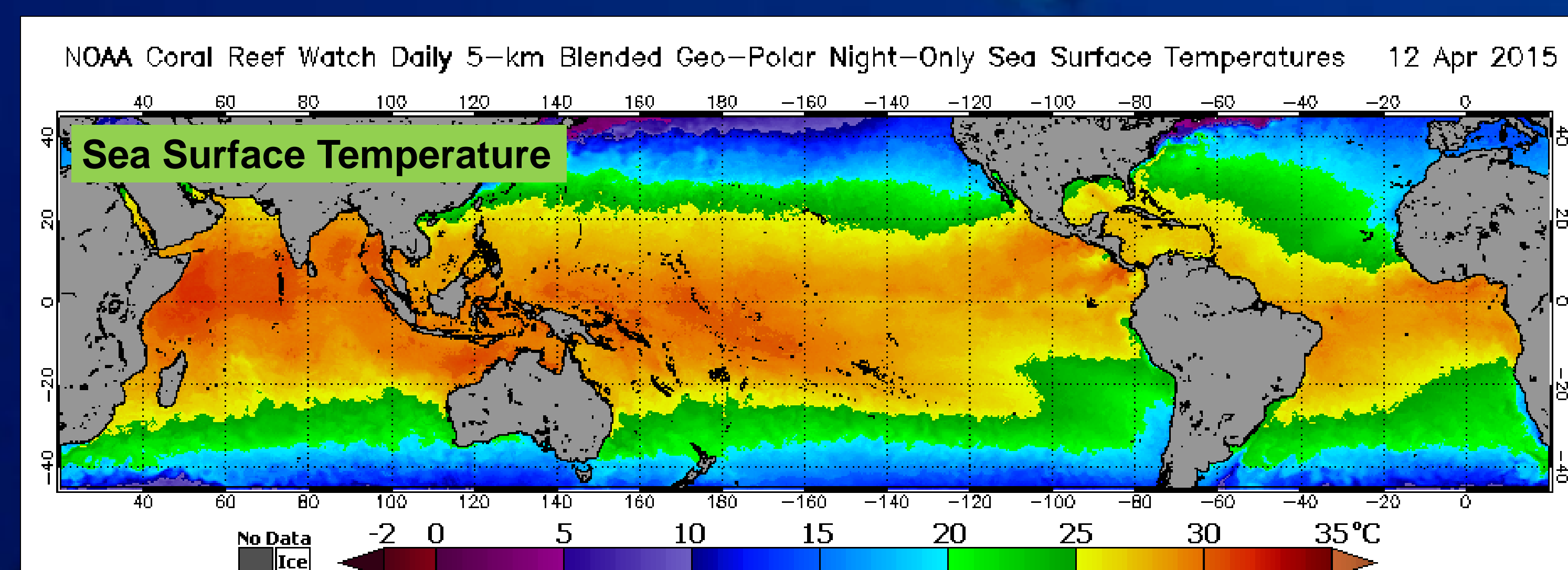
Erick F. Geiger, C. Mark Eakin, Gang Liu, Jacqueline L. De La Cour, Scott F. Heron, William J. Skirving, Alan E. Strong
NOAA/NESDIS/STAR, Global Science & Technology, Inc.,



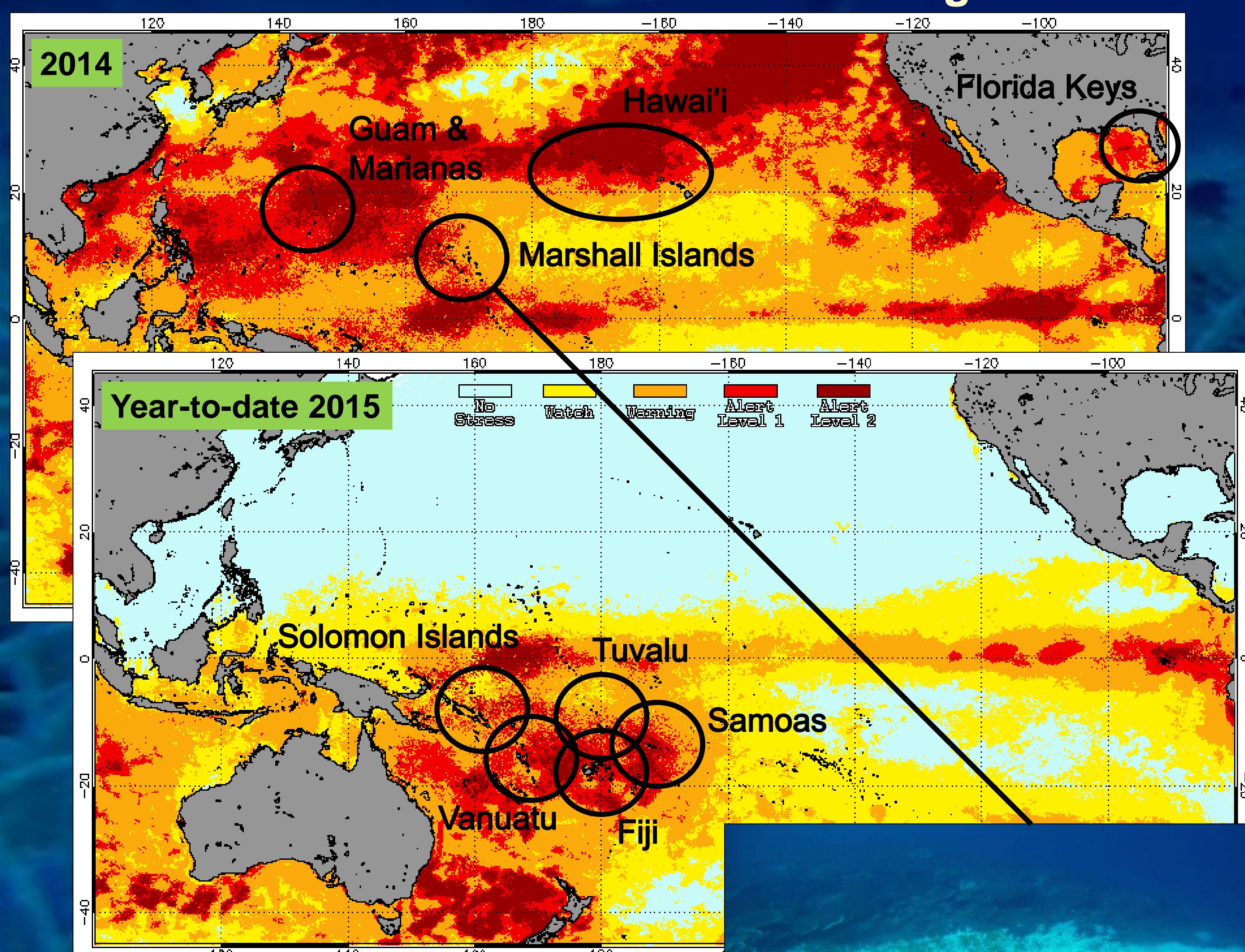
With support from NASA Applied Sciences Biodiversity and Ecological Forecasting program and NOAA's Coral Reef Conservation Program, NOAA Coral Reef Watch (CRW) has developed and implemented a next-generation near-real-time satellite decision support system to monitor conditions leading to coral bleaching. New products transition the CRW global system from 50-km to 5-km resolution, with 100x greater spatial resolution and 25-100x greater data density per pixel. These products are moving toward operational status at NOAA/NESDIS and are already being applied by resource managers. We are pushing to combine VIIRS SST and 2-km Himawari-8 and GOES-R SST to develop regional 1-km blended products for the Coral Triangle and Australia's Great Barrier Reef.

New Coral Reef Watch Early Warning System for Mass Coral Bleaching Events

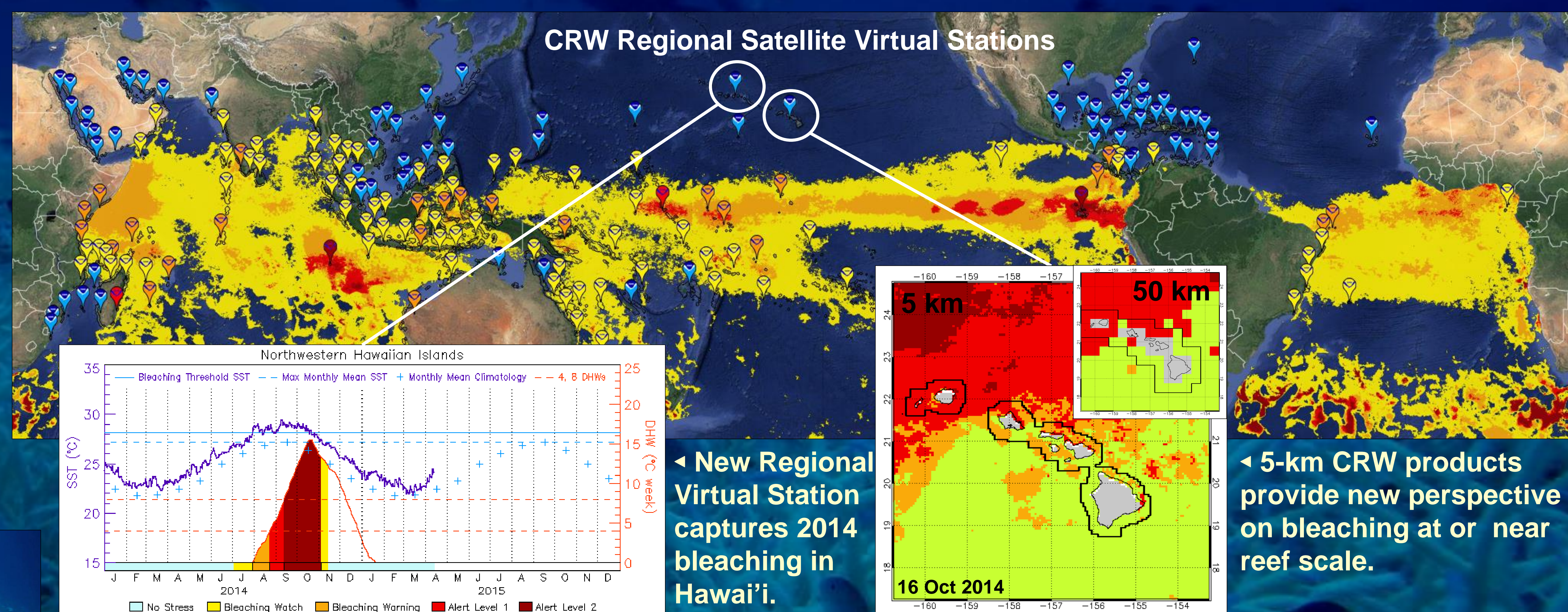
(Current system: 50-km, twice-weekly; Next-generation system: 5-km, daily)



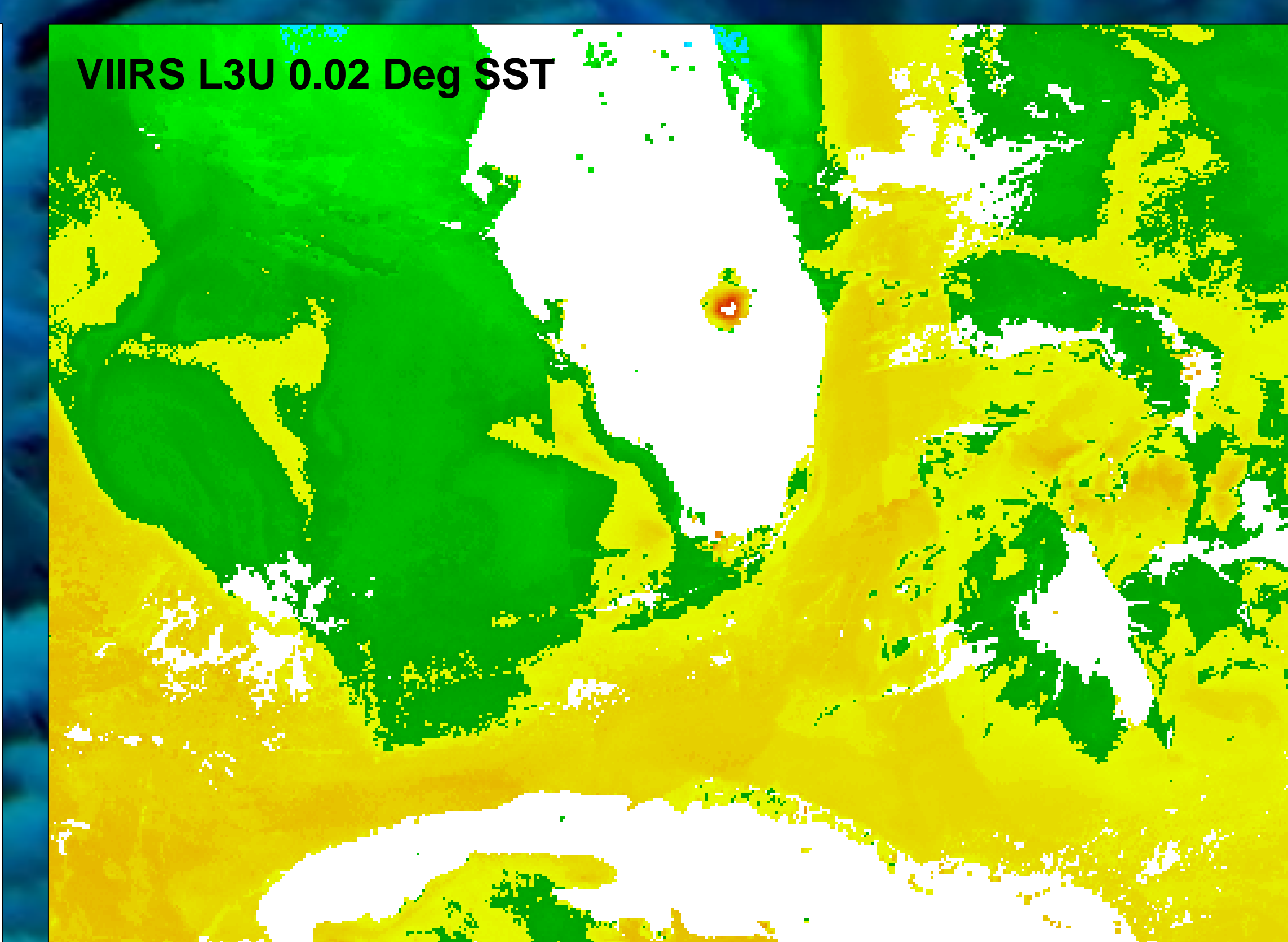
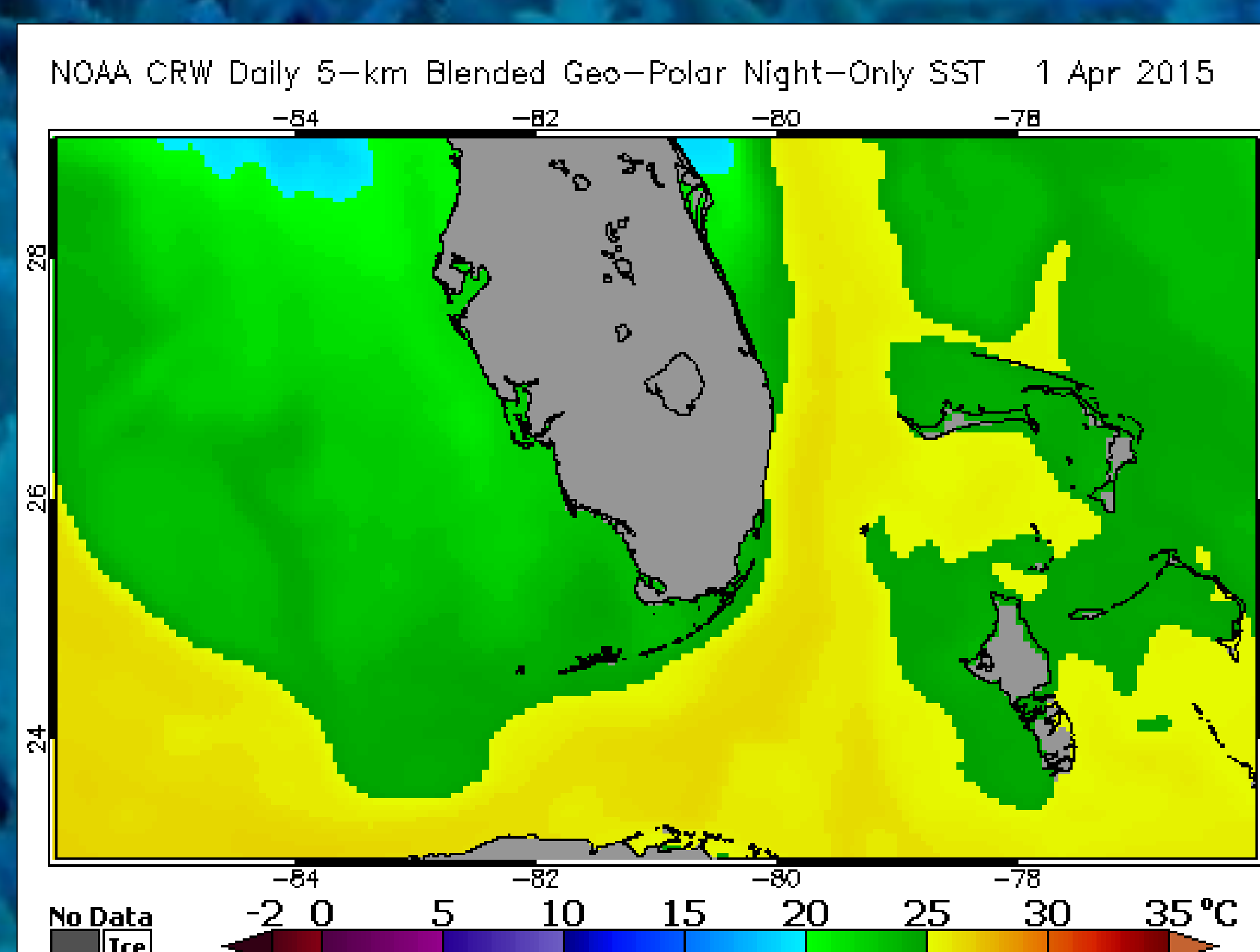
Annual Maximum Satellite Coral Bleaching Alert Area



► Bleaching Alert Area products provide direction for reef surveys. The surveys confirm the accuracy of predictions.



► CRW utilizes NOAA's operational 5-km Geostationary-Polar Blended SST Analysis. Blended satellite data is essential for reliable gap-free analysis.
►► VIIRS data blended with 2-km Himawari-8 and GOES-R SST will provide CRW the opportunity to test products at 1 km.



Acknowledgements:
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<https://coralreefwatch.noaa.gov>

The only satellite-based system available for U.S. and global coral reef management

Coral Reef Watch: a NOAA/NESDIS program, funded predominantly by the NOAA Coral Reef Conservation Program (CRCP), integrates scientists from the Center for Satellite Applications and the Research (STAR) and Office of Satellite and Product Operations (OSPO).