

Weekly Report – May 24, 2024
Cooperative Institute for Satellite Earth System Studies (CISESS)
NOAA/NESDIS/STAR

Submitted by: Debra Baker & Maureen Cribb
Email: drb@umd.edu
Phone: 301-405-5397

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TRAINING AND EDUCATION

2024 CISESS Summer Internship Program Kicks Off June 3rd

The 2024 CISESS Summer Internship Program will have the most intern projects ever. Mentors selected their interns from a pool of over 100 accomplished applicants. Thirty CISESS and NOAA scientists will mentor 46 talented and motivated interns, including 14 high school students, 3 incoming freshman, 26 undergraduate students, and 3 graduate students. Thirty-four internships will be funded by CISESS Task I, while the rest will be funded by the mentors' own grants. Innovative projects include remote sensing of water quality with ultraviolet spectroscopy, exploring satellite image registration with artificial intelligence, creating an educational virtual-reality module for cloud classification, and investigating the global carbon budget based on vegetation status using satellite data. The majority of interns will begin June 3rd and will work 12 weeks, culminating in end-of-summer presentations and reports.



(Katherine Cooney, CISESS, kscooney@umd.edu, Funding: Task I)

CISESS Scientists Bring Their Expertise to NOAA's New Consortium for Advanced Data Assimilation Research and Education

CISESS Scientists Kayo Ide and Jonathan Poterjoy were featured in a recent [article](#) in the University of Maryland's *Maryland Today* publication, highlighting their participation in a new NOAA consortium focused on improving data assimilation for numerical weather forecasting purposes and training the next generation of atmospheric scientists in this quickly evolving in-demand research field. Ide and Poterjoy will investigate ways to improve data assimilation for ocean and cryosphere applications. UMD graduate students and postdocs will be involved in this effort as part of the workforce development side of the collaboration. This will supplement the work CISESS already does in preparing students and young scientists for future employment at NOAA.

(Kayo Ide, CISESS, ide@umd.edu, Funding: EMC; Jonathan Poterjoy, CISESS, poterjoy@umd.edu, Funding: EMC)

MEDIA INTERACTIONS AND REQUESTS

Global Coral Bleaching Continues

CISESS Scientist Jacqueline De La Cour contributed to a [NOAA Climate.gov piece](#), released May 21, 2024, comparing the [ongoing global coral bleaching event](#) to past global bleaching events. What is noteworthy about the current global bleaching event is the amount of accumulated heat stress across the Atlantic Ocean basin. No prior documented global bleaching event showed such severe and widespread heat stress throughout the Atlantic. Within the past year, 99.7% of tropical coral reef areas in the Atlantic have experienced bleaching-level heat stress. Also, while the [2014-2017 event](#) is still considered the longest, most widespread, and [most damaging](#) of the four known global coral bleaching events, the current event is expected to surpass the extent and severity of the previous event in the weeks ahead.

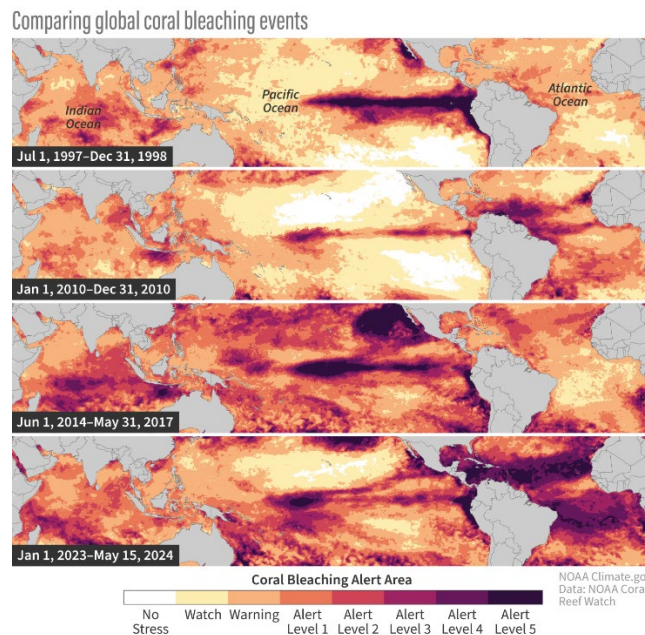


Figure: The above maps show how the current global coral bleaching event compares with the prior three global events in 1998, 2010, and 2014-2017. The top three maps show the location and intensity of coral heat stress during the peak of each of the three prior events. The bottom map shows the peak-to-date of the current global event through mid-May 2024. Using NOAA CRW's updated bleaching alert levels, the maps rank heat stress on a scale of 1 to 5. Categories are based on a combination of how hot the water is (compared to the average temperature during each location's hottest month of the year) and how long the temperatures have been elevated. NOAA Coral Reef Watch compares its Bleaching Alert Level 5 to a Category 5 hurricane in terms of impacts to coral reef ecosystems. Image created by NOAA Climate.gov.

*(Jacqueline De La Cour, CISESS, jacqueline.shapo@noaa.gov, Funding: NOS)
[This item was submitted in the SOCD Weekly Report.](#)*

PUBLICATIONS

Connection Between Canadian Wildfire Smoke and Cardiopulmonary Cases in Maryland

Citation: Maldarelli, M. E., Song, H., Situt, M., Reilly, C., Mahurkar, A. A., Felix, V., **Ellicott, E.**, Jurczak, M., Crabtree, J., Gumel, A., D'Souza, W., Sapkota, A., & Maron, B. A. (2024). The association between Canadian wildfire smoke infiltration and statewide cardiopulmonary clinical encounters in Maryland. *Am. J. Respir. Crit. Care Med.*, 209, A4858.

Summary: CISESS Scientist Evan Ellicott coauthored an abstract for a talk at the American Thoracic Society 2024 International Conference, which took place in San Diego, CA from 17-22 May 2024. In the session “Breathing Amidst Adversity: Exploring the Impact of Air Pollution on Respiratory Health and Beyond,” the talk was entitled “The Association Between Canadian Wildfire Smoke Infiltration and Statewide Cardiopulmonary Clinical Encounters in Maryland.” The abstract appears in the latest issue of the *American Journal of Respiratory and Critical Care Medicine*. The abstract can be found at: https://www.atsjournals.org/doi/abs/10.1164/ajrccm-conference.2024.209.1_MeetingAbstracts.A4858.

(Evan Ellicott, ellicott@umd.edu, CISESS, Funding: DRSA)

(Maureen Cribb, CISESS, mcribb@umd.edu, Funding: Task I)