

Observed Marine Heatwaves

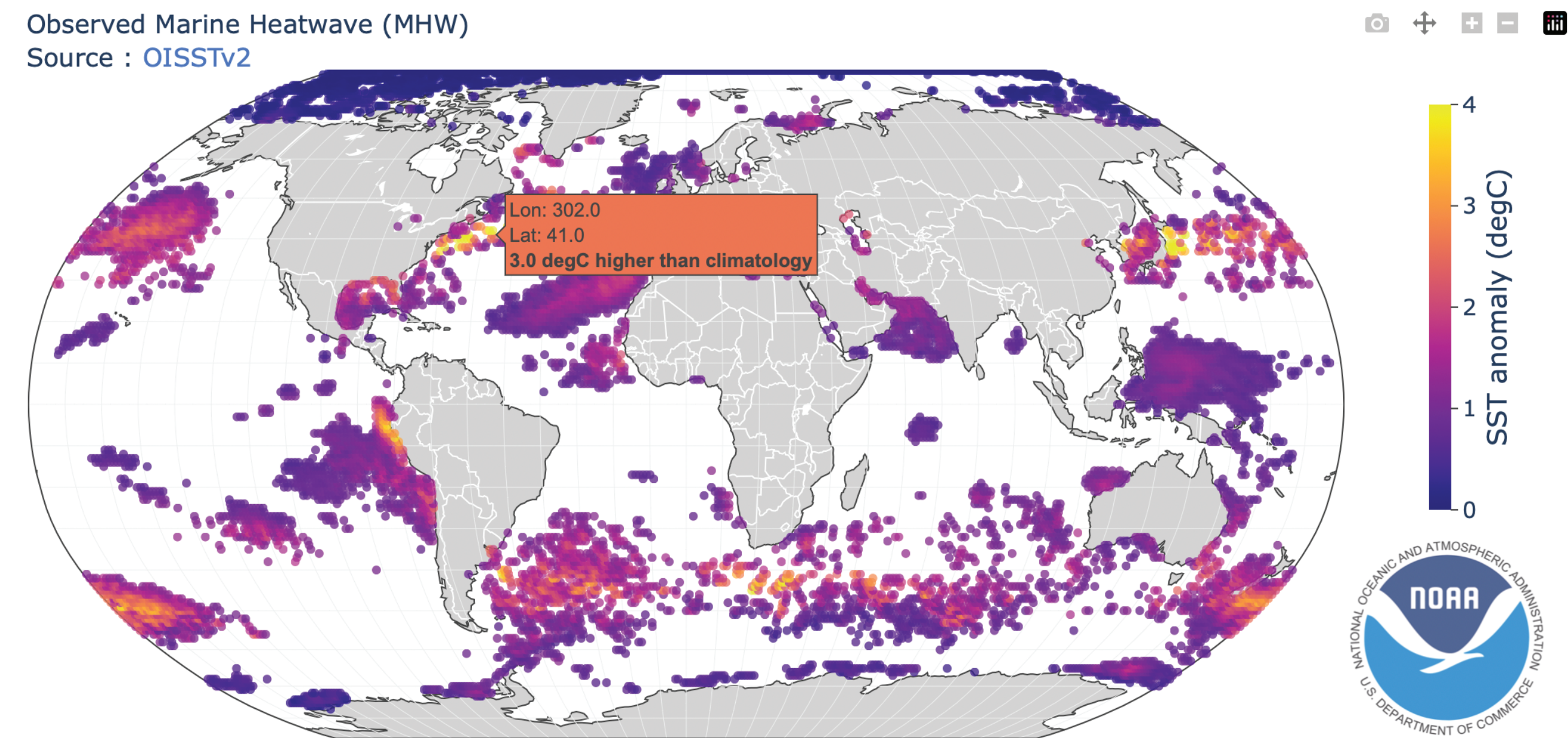
Is There a Marine Heatwave Happening Around the World Today? Do We Have a Forecast to Know Where and When?

Marine Heatwave Forecasts

Global view of identified marine heatwaves

Year: 2023 | Month: Mar | Projection: robinson | Percentile: 90th

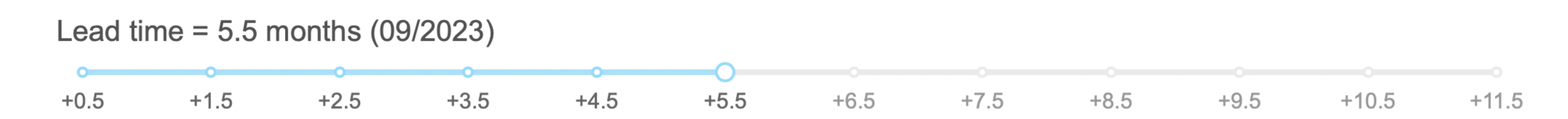
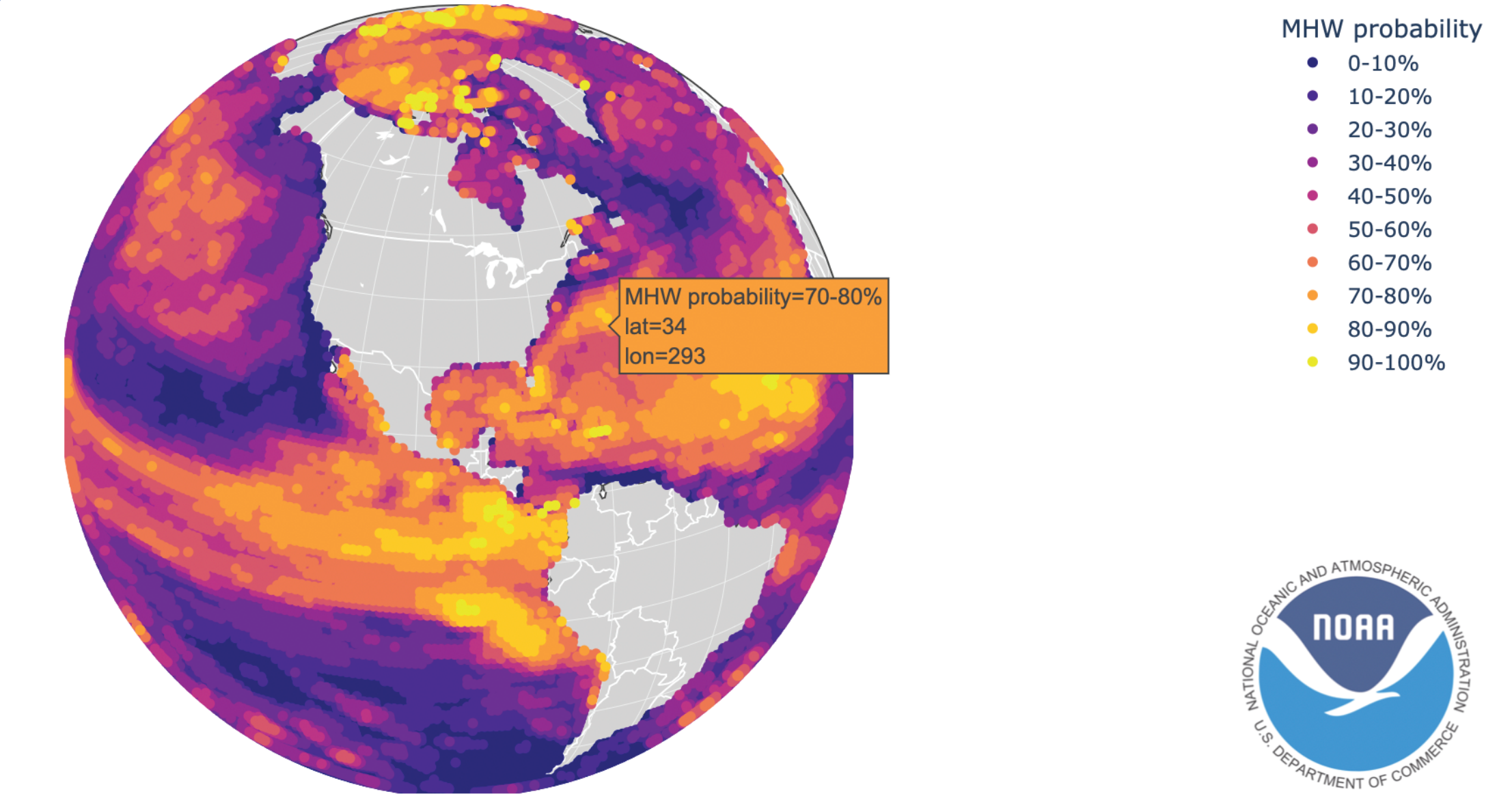
Remove long-term temperature trends? No Yes



Initial year: 2023 | Initial month: Apr | Projection: orthographic

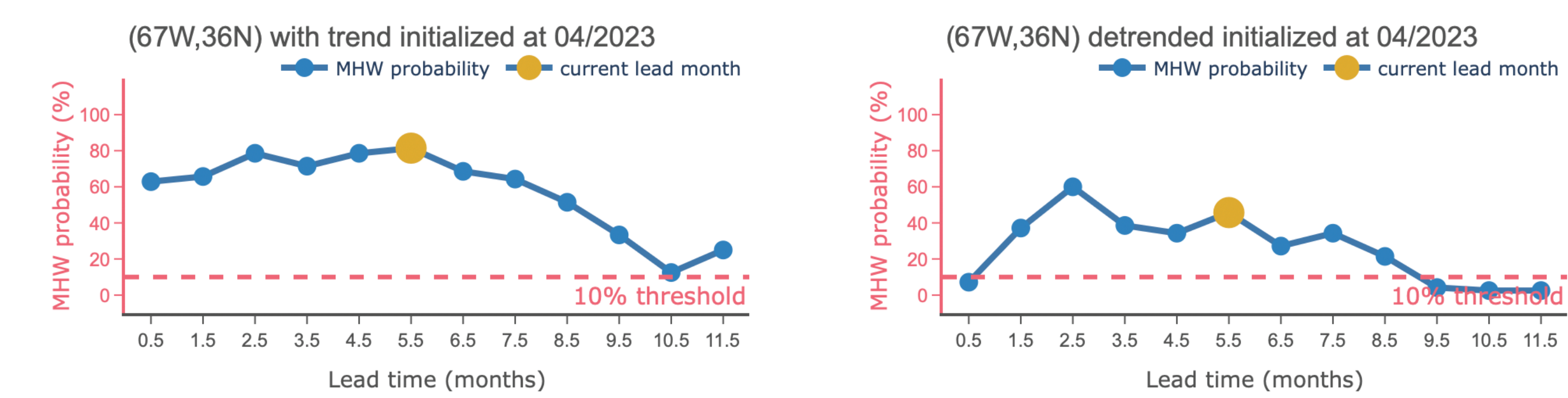
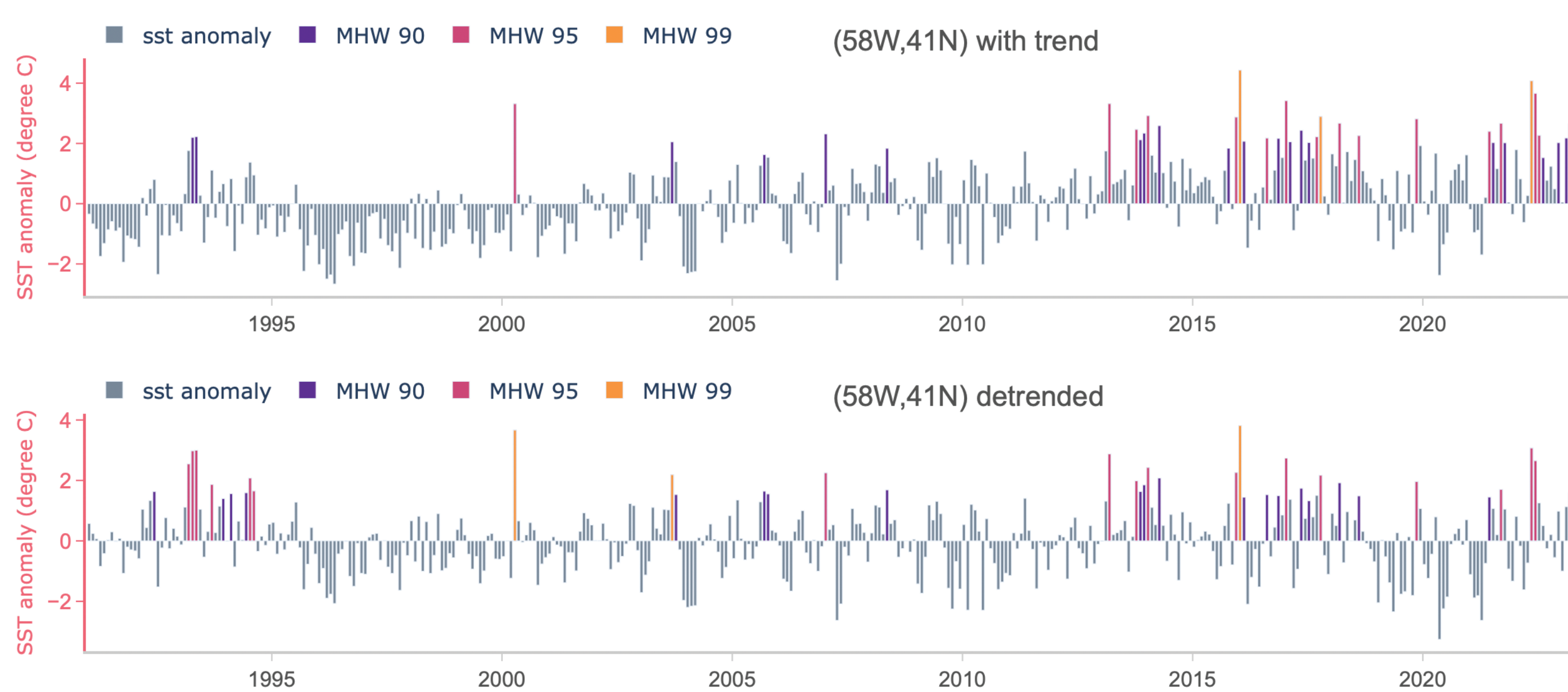
Remove long-term temperature trends? No Yes

Marine Heatwave (MHW) Forecast [Jacox et al., 2022]
Derived from : NMME

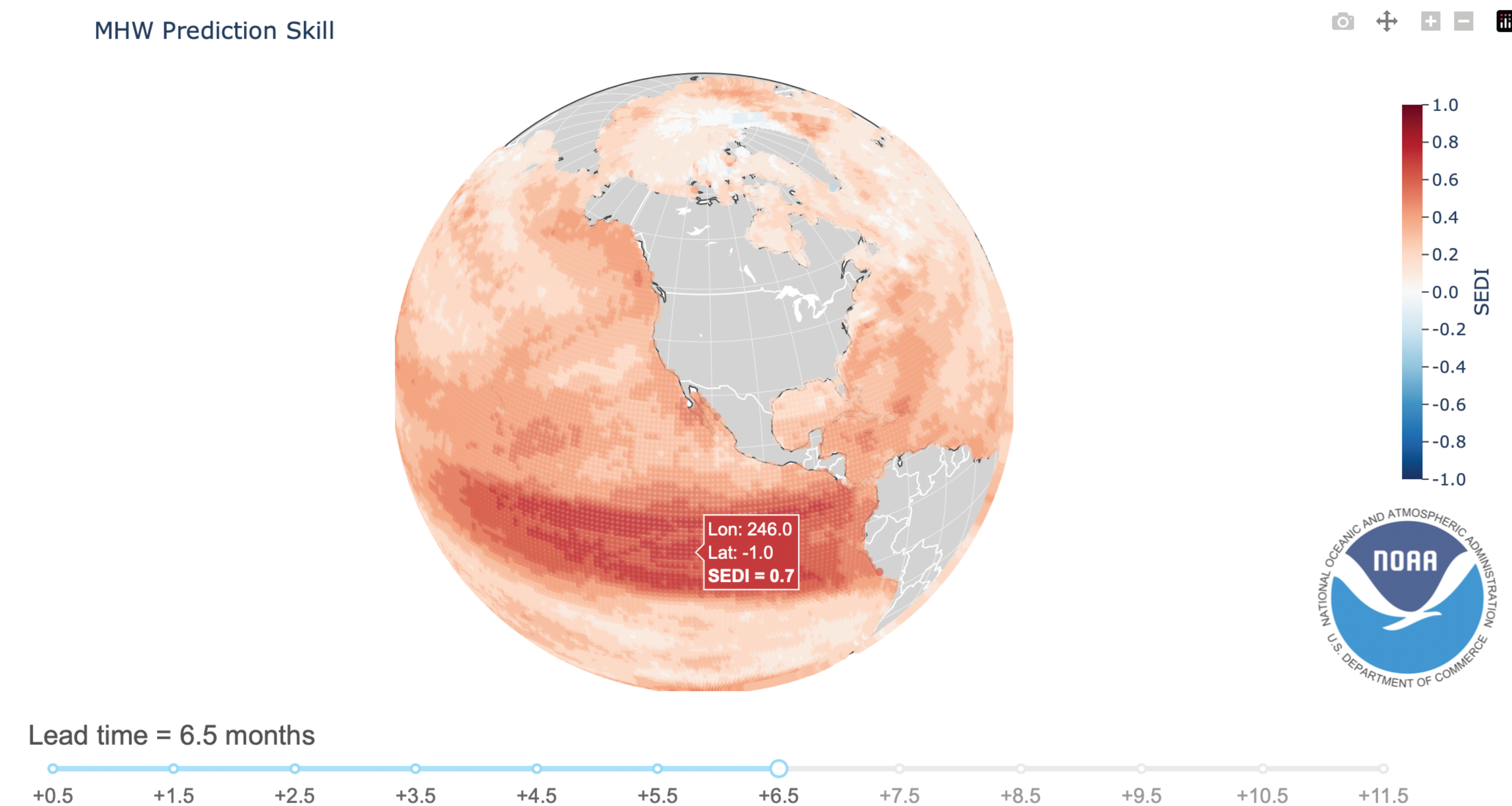


Single point time series

Single point time series



Marine heatwave prediction skill



High resolution observed SSTs in large marine ecosystems

High Resolution Ocean Surface Condition

User Options: Spatial map, Time series, Animation (7 days), Advanced - Compare statistics, Advanced - Compare datasets

Dataset: 1. NOAA STAR (2002/09-present)

Region: 12. NE U.S. Shelf

Frequency: Daily

Statistic: Anomaly

Year: 2023

Month: Apr

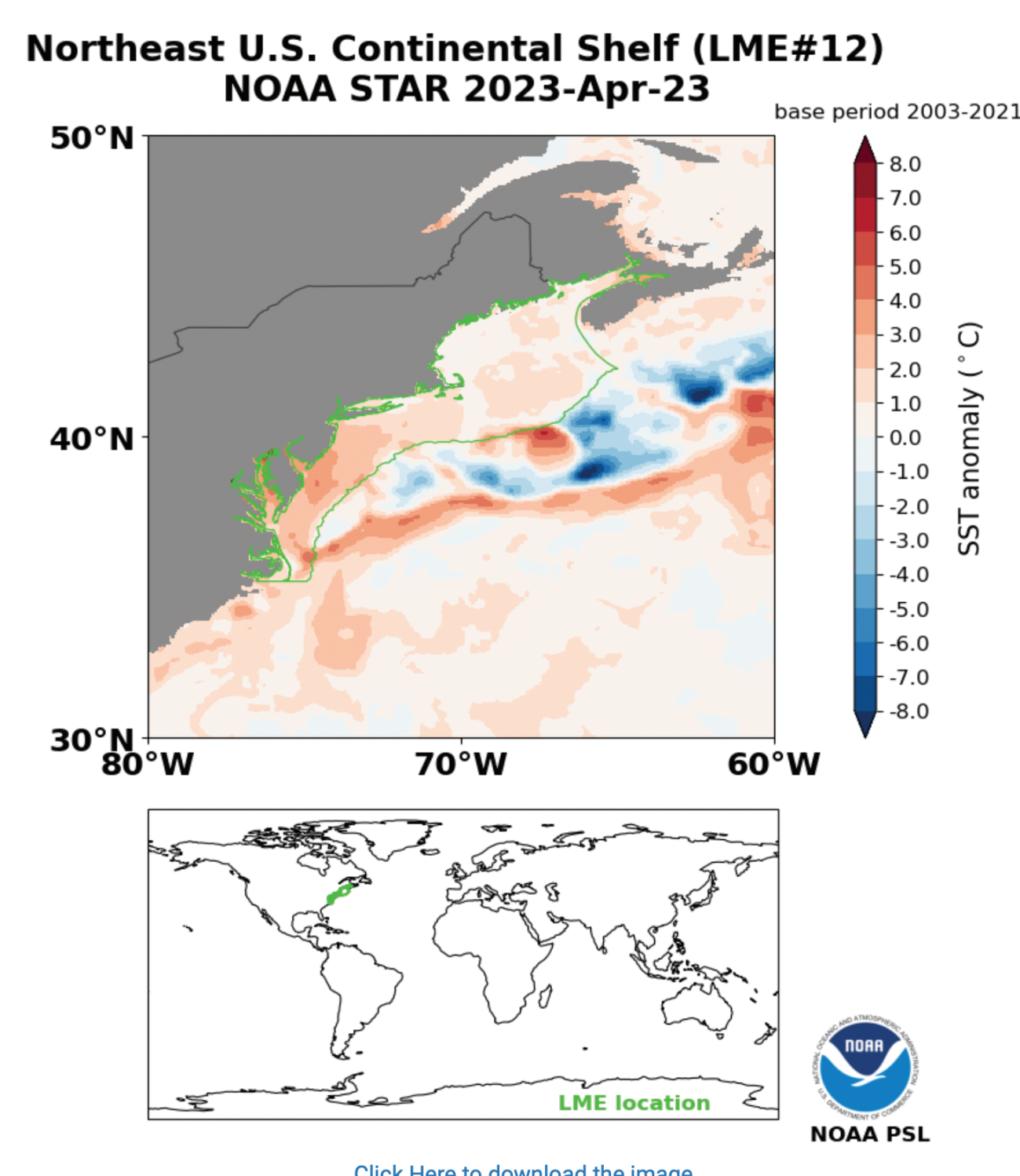
Day: 23

Plot

Large Marine Ecosystems (LMEs) map showing the associated ID number and name.

Dataset availability for date (year, month, day) options.

NOAA CIRES NOAA PSL



Large marine ecosystems (LMEs) are regions on the order of 200,000 km² or greater. The total 66 LMEs produce about 80% of global annual marine fishery biomass (USD 12.6 trillion in goods and services each year)

What is a marine heatwave & Why it matters?

Marine heatwaves are periods of persistent anomalously warm ocean temperatures, which can have significant impacts on marine life as well as coastal communities and economies.

Authors : Chia-Wei Hsu, Michael Alexander, Catherine Smith, Michael Jacox, & Chris Kreutzer



Scan me to browse the marine heatwave portal



Reference:

Jacox, M. G., M. A. Alexander, D. J. Amaya, E. Becker, S. J. Bograd, S. Brodie, E. L. Hazen, M. Pozo Buil, and D. Tommasi (2022); Global seasonal forecasts of marine heatwaves, Nature, 604, 486-490,

Website URL:

http://psl.noaa.gov/marine-hwatwaves