

Mapping linear correlations using the NOAA Plotting and Analysis portal:

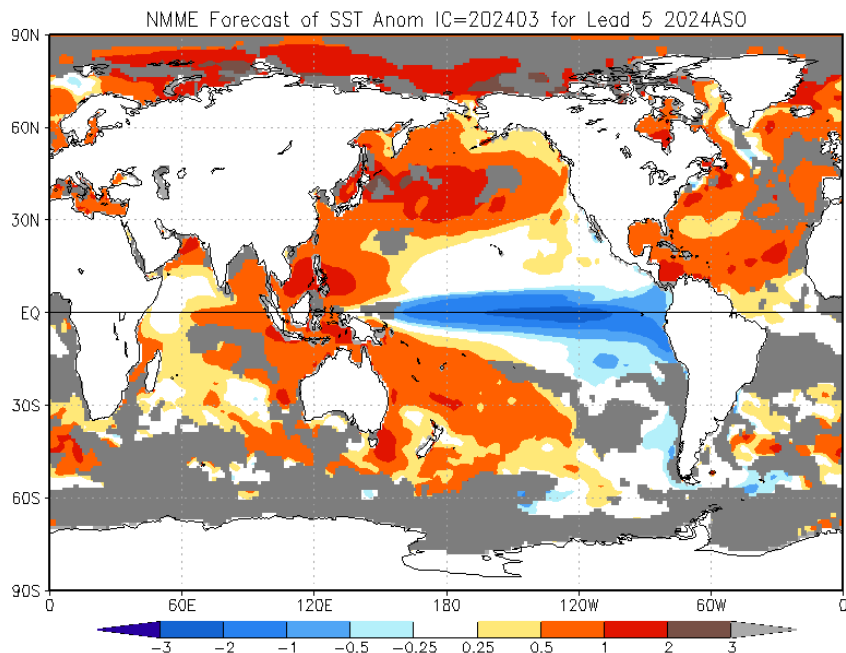
<https://psl.noaa.gov/data/correlation/>

The objective of this lab is to A) identify an online resource that allows you to calculate and map correlations between climate variables and to B) provide a correct interpretation of the results.

The task is to correlate the SST and rainfall variables with the Nino 3.4 index. You will be expected to produce a map for both the lagged correlation and the concurrent correlation.

1. Make sure the correlation option is select.
2. Select SST from the variable list. Ignore the Analysis level option.
3. For the concurrent correlation, select the season beginning in August and ending in October. This is a lag 0. For the lagged correlation, select January to March and select lag 7. You will want to use the 1995-2022 time period.
4. Create a shaded color plot for the entire globe. Download and save these image for both lagged and concurrent correlations.
5. Do the same, but use GPCP Precipitation variable instead of SST.
6. Answer the questions

1. What is the approximate correlation between SST and the Nino 3.4 index at both time scales around the central Caribbean? Include the maps for full credit. 4pts



2. Here is a seasonal forecast for SST for August – October 2024. What is the approximate correlation between SST and Nino3.4 for this period in the Central Caribbean? 2pts

3. What might one expect for observed SST in that region for Aug-Oct 2024 seasonal average? Explain in a few sentences. 2pts

4. What might one expect for rainfall in that region for Aug-Oct 2024? Explain in a few sentences. 2pts

Submit final document to tallen@cimh.edu.bb by March 18, 2024