Forecast Ecosystem Conditions in Gulf of Mexico OCS Habitats Using Coupled Modeling and Climate Scenarios

Quarterly Report (Y2Q3 – Apr 1-Jun 30, 2018)
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This quarterly report is filed per requirements of BOEM-NRL IAA # M16PG00027 with respect to our research project focused on climate-scale ocean model simulations for the Gulf of Mexico. The focus of this study is to forecast, through year 2050, marine ecosystem conditions in the Gulf of Mexico (GoM) using RCP climate scenarios prescribed by the NCAR CESM Large Ensemble (LE) atmospheric forcing.

1. WORK ACCOMPLISHED

The NCOM and HYCOM long term simulations were completed and a last-10-year climatological mean constructed to assess the models' robustness and seasonal variability (Figure 1). An article was written (published July 2018) for BOEM Ocean Science Journal.

2. PROBLEMS

A project web page is being developed. The initial portal is ready but due to new implementations of webserver security, it will not be available until next or the following quarter.

3. PLANNED ACTIONS FOR NEXT QUARTER

Construct a "Road Map" of experiments and start generating input forcing for CONTROL runs.

4. BUDGET

Minimal activity/expenditures during this quarter.

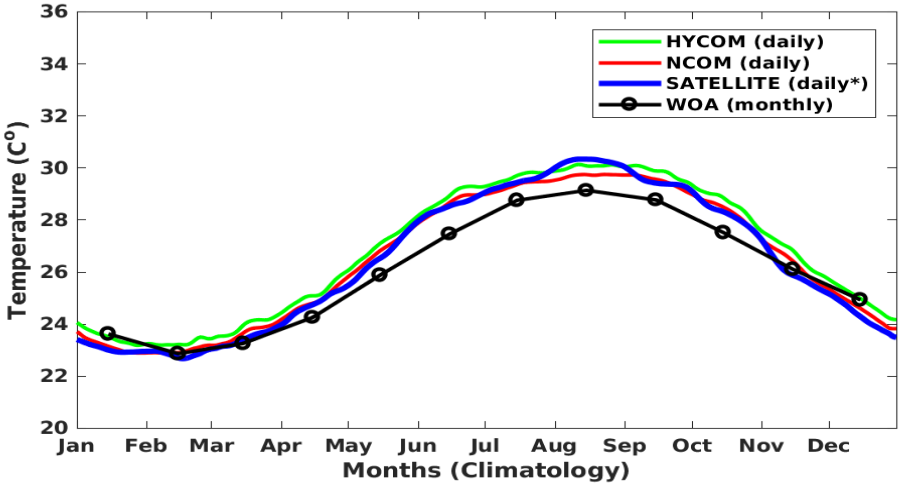

Figure 1. 10-year climatology (long term mean 2006-2015) of Sea Surface Temperature for HYCOM, NCOM, MODIS-A, VIIRS (*satellite daily gaps filled by linear interpolation), WOA09.