

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

**Quarterly Report (Y2Q2 – Jan 1-Mar 31, 2018)
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Sergio deRada
Naval Research Laboratory, Stennis Space Center, MS 39529

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

There is nothing to report this quarter. Two long term (circa 1993-2015) climatological simulations were completed in previous quarter but were not processed or analyzed due to a catastrophic data loss suffered in December 2017. This analysis will be done in the upcoming months.

2. PROBLEMS

The data loss occurred on December 12, 2017. Third-party services completed the recovery in February 2018, but only at an estimated 94% recovery rate. Some pertinent analysis software (e.g. Matlab scripts) for this project was lost and is being rewritten as needed.

3. PLANNED ACTIONS FOR NEXT QUARTER

The assessment of the two aforementioned NCOM and HYCOM climatological runs will be performed and a project website (available by password) started. This project website will be a central location for project related information, including analyses, documentation, forcing functions, data sources, and pertinent references.

4. BUDGET

Y1 and Y2 funds, \$80,000 each, have been received. A budget summary report will be compiled for next quarter.