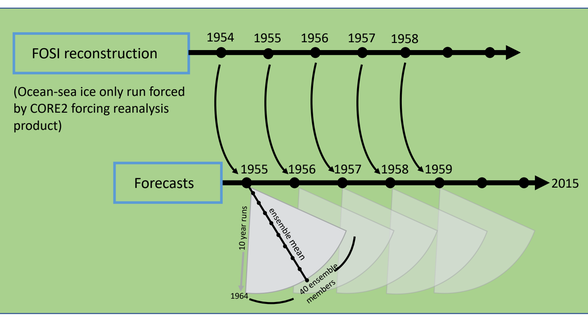
Decadal prediction of net primary production in the ocean

Kristen M. Krumhardt[1,3], Nicole S. Lovenduski[2], Matthew Long[3], Jessica Luo[3,4], Keith Lindsay[3], Steven Yeager[3], Cheryl Harrison[5]

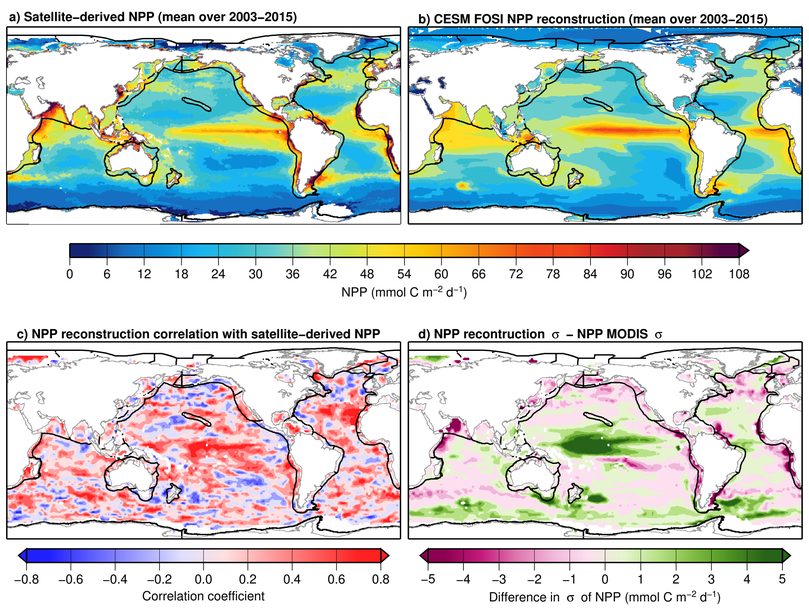
[1]Environmental Studies Program and Institute of Arctic and Alpine Research, University of Colorado Boulder, Boulder, Colorado, U.S.A.
[2]Department of Atmospheric and Oceanic Sciences and Institute of Arctic and Alpine Research, University of Colorado Boulder, Boulder, Colorado, U.S.A.
[3]Climate and Global Dynamics, National Center for Atmospheric Research, Boulder, Colorado, U.S.A.
[4]Geophysical Fluid Dynamics Laboratory, Princeton, New Jersey, U.S.A.
[5]Port Isabel Lab, University of Texas Rio Grande Valley, U.S.A.

Using the CESM-DPLE to forecast interannual variations in marine NPP

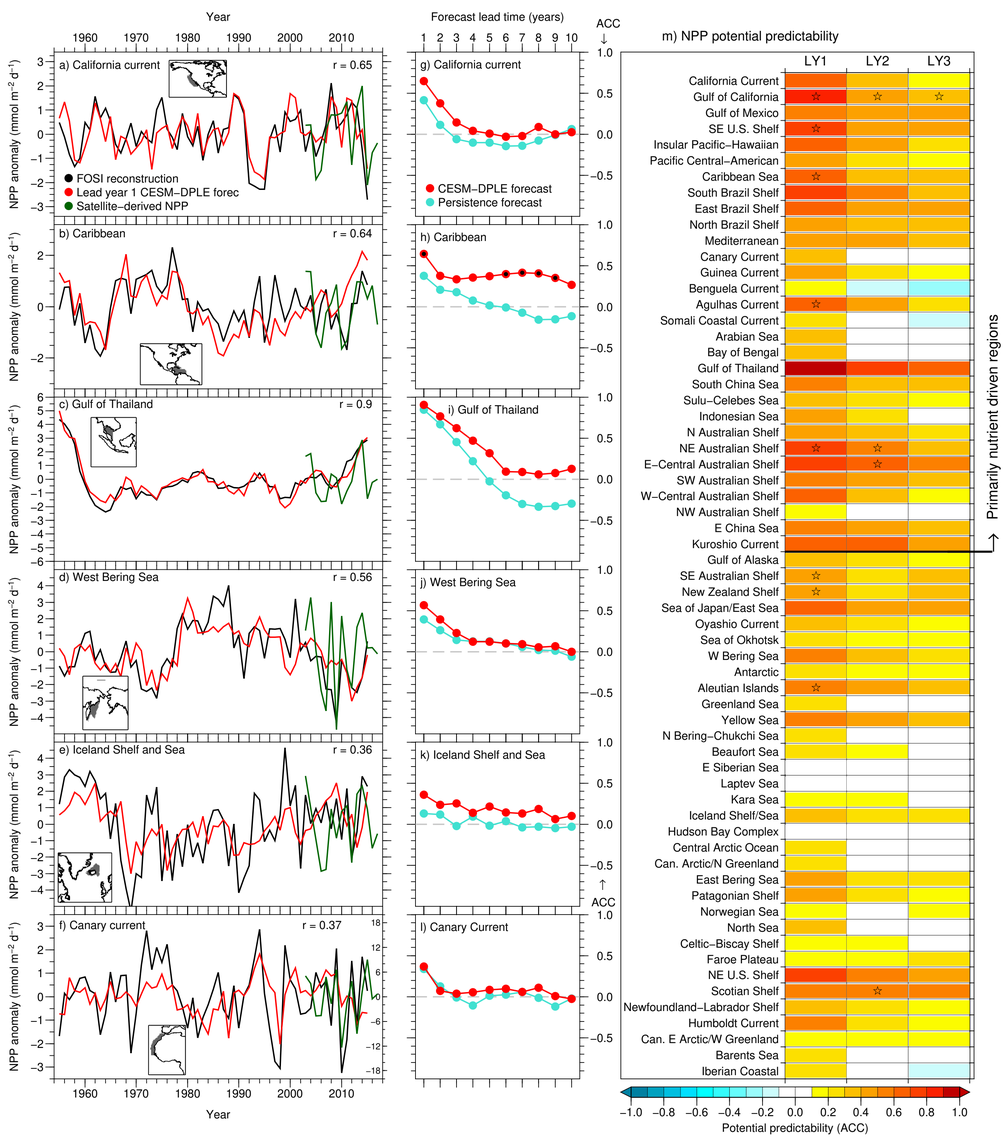
Community Earth System Model Decadal Prediction Large Ensemble (CESM-DPLE)



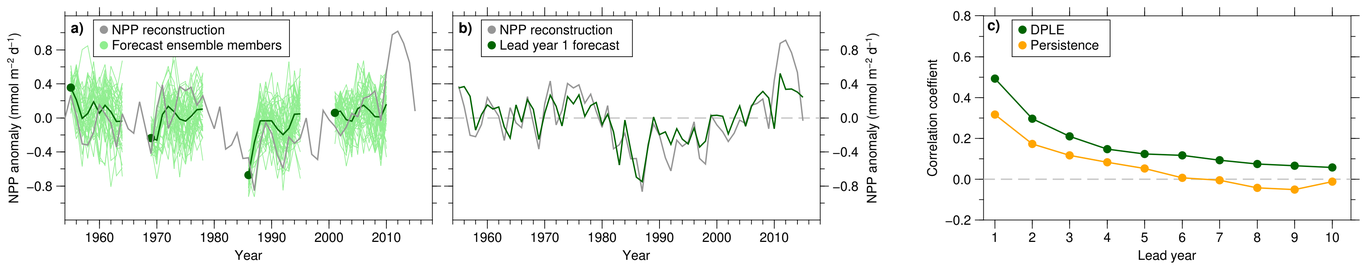
Simulating marine NPP in CESM

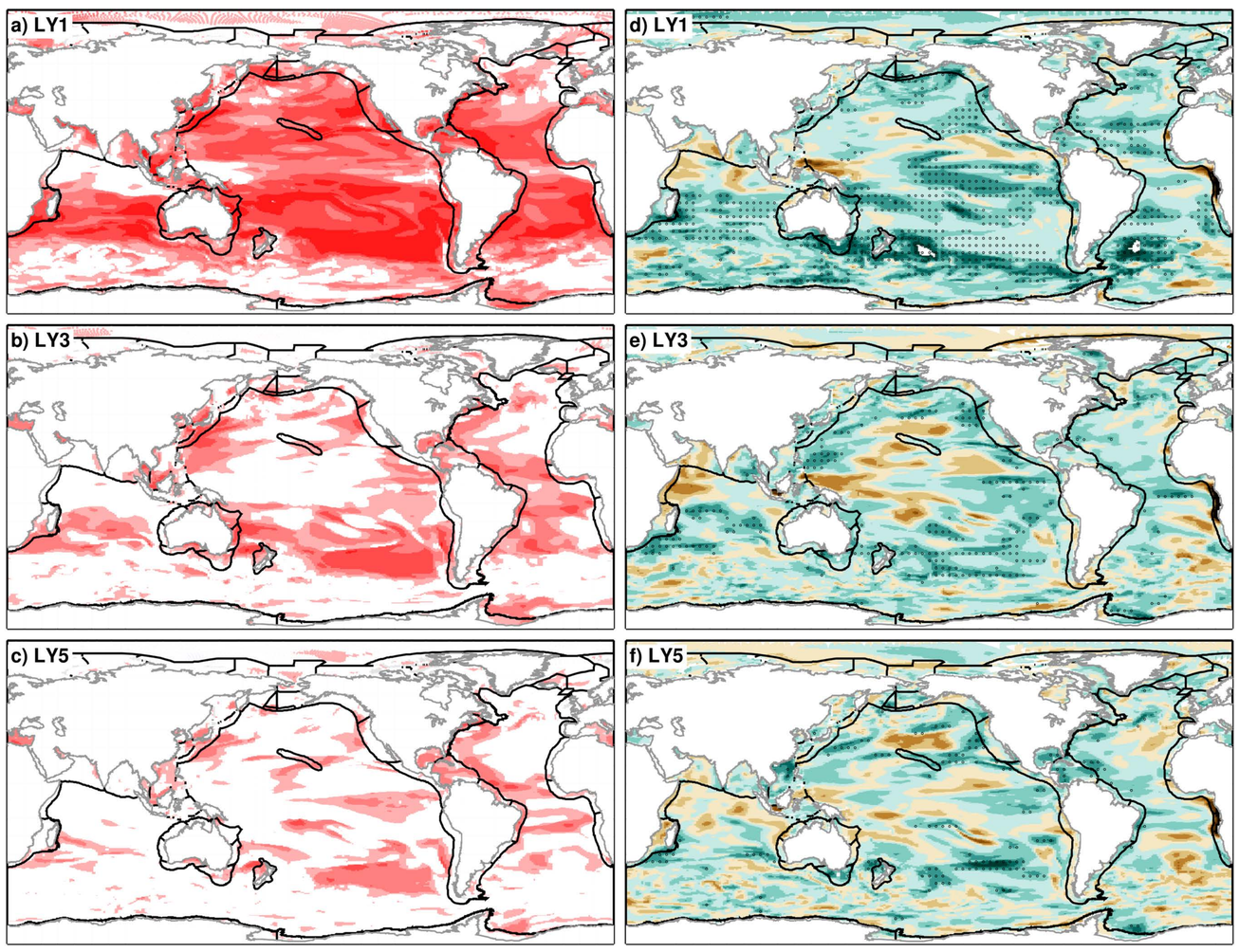


Predicting NPP in Large Marine Ecosystems

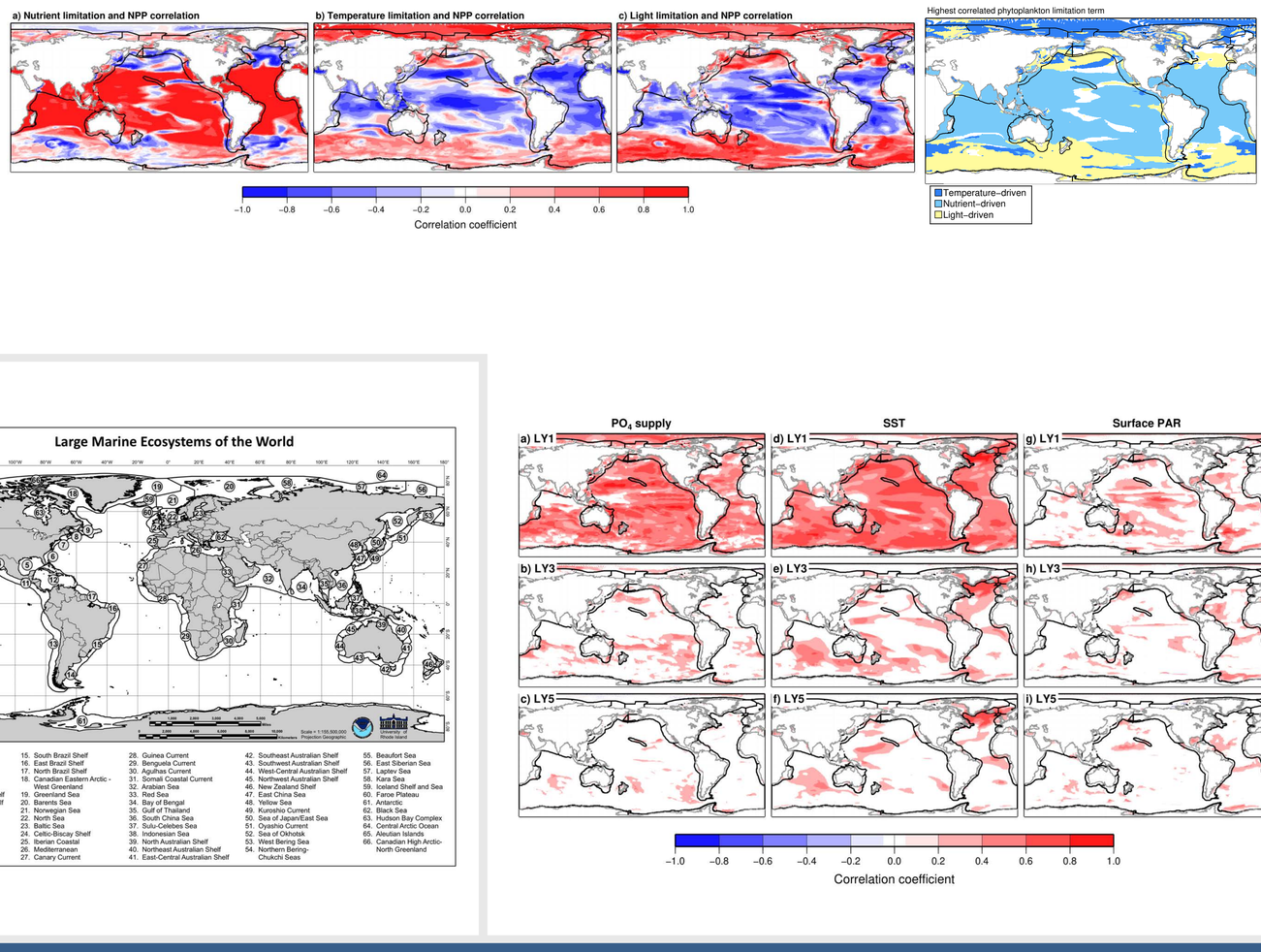


Potential predictability of marine NPP





Drivers of NPP enable/hinder predictability



Contact: kristenk@ucar.edu