

Data Management

Data Policy Compliance

The project investigators will comply with the data management and dissemination policies described in the *NSF Award and Administration Guide* (AAG, Chapter VI.D.4) and the *NSF Division of Ocean Sciences Sample and Data Policy*.

Pre-Cruise Planning

No cruises are planned

Description of Data Types

The project will produce model outputs as described below. In addition to the datasets described below, educational resources produced by the project, including data and images, will be made available for public use on the project website, <http://ecosystems.mbl.edu/MEP-Darwin>

Modeling Datasets:

1. **Food web run:** Production model runs will simulate concentration of food web components consisting of phytoplankton, grazers and associated chemical fields including chlorophyll a, nitrate, ammonium, dissolved and particulate organic matter. File types: Images (JPG). Repository: BCO-DMO
2. **Metabolic Function:** Model runs will also include prediction of mass fluxes of C and N through primary metabolic pathways, such a carbon dioxide fixation, nitrogen fixation, inorganic nitrate uptake. File types: Images (JPG). Repository: BCO-DMO
3. **Entropy Production:** Simulations will produce vertically integrated entropy production associated with biogeochemical processes. File types: Images (JPG). Repository: BCO-DMO

Data and Metadata Formats and Standards

Model data will be stored in flat ASCII files, which can be read easily by different software packages. Metadata for file formats will accompany data files for interpretation of model state variable outputs.

Data Storage and Access During the Project

A subset of model results (restricted by the large volumes of possible output) from the regional simulations, and visualizations of selected results, will be made available for download through MIT's Darwin Project web site (<http://darwinproject.mit.edu>) as well as on the project specific web site <http://ecosystems.mbl.edu/MEP-Darwin>.

Mechanisms and Policies for Access, Sharing, Re-Use, and Re-Distribution

All developments to the MIT ocean model (physical, biogeochemical and ecological) are open-source and made freely available through the MITgcm.org website, along with documentation and tested example configurations. This will continue for the proposed study, allowing the model studies to be replicated, if so desired, or adapted and extended by the broader community.

Model versions and simulations associated with project publications will be archived on the project website as well as on BCO-DMO at time of publication so that results can be recreated.

Plans for Archiving

All developments to the MIT ocean model (physical, biogeochemical and ecological) are open-source and made freely available through the MITgcm.org website, along with documentation and tested example configurations.

In addition to archiving model output on the project websites, images and movies associated with publications will be archived with the BCO-DMO

Roles and Responsibilities

PI's Vallino and Follows will be responsible for insuring proper freezing of model code and output associated with all project publications and the archiving of code and output on the project websites and with the Biological and Chemical Oceanography Data Management Office (BCO-DMO)