Data management plan

This modeling project will produce model outputs from the ROMS/SWAN simulations and from the experiments using LTRANS. Source code and support for ROMS is available from http://www.myroms.org, maintained at Rutgers University. Source code and manuals for the SWAN model are available from SourceForge through http://www.swan.tudelft.nl/. Code and manuals for the LTRANS model are available from the University of Maryland Center for Environmental Science at http://northweb.hpl.umces.edu/LTRANS.htm.

Data types

This project will produce model outputs from the ROMS/SWAN model and from our numerical experiments in LTRANS.   We will also modify LTRANS source codes to include Stokes drift and larval responses to vorticity and acceleration.

Metadata

At the beginning of the project, we will submit project metadata to the Biological & Chemical Oceanography Data Management Office (BCO DMO). Model metadata will be included in output files. Metadata for ROMS/SWAN model outputs will include grid specifications, initial and boundary conditions, and input conditions. Metadata in the LTRANS outputs will include the ROMS/SWAN metadata as well as details of particle seeding and behavior.

Model metadata will be also be archived, along with input files and source codes, on the BCO-DMO archive.

Security policies

Model outputs, input files, and source codes will be made freely available after the results have been analyzed and published.

Use policies

Model output from ROMS/SWAN will be made publicly available as NetCDF files posted to an OPeNDAP/THREDDS network-attached server hosted at Rutgers University. Data in the NetCDF files can be accessed remotely using viewers and toolboxes based on standards set by Unidata at UCAR, including the Integrated Data Viewer (IDV) and nctoolbox (http://nctoolbox.github.io/nctoolbox/) for Matlab.

Modified LTRANS codes will be posted to BCO-DMO and offered to the LTRANS developers for inclusion in their host site.

We will also work with BCO-DMO to document and submit all model-related products deemed relevant at the close of the project period, in compliance with the current guidance from NSF and BCO-DMO.

Preservation:
All model data are backed up daily on Network-Attached file Servers at Rutgers. After publication, model outputs will be archived on these servers along with metadata, input files, and the source code used to generate each simulation. All metadata, source code, and input files will be also submitted to BCO-DMO, serving as a long-term backup.