

# Copepod Population Dynamics in Hypoxic Coastal Waters: Physical and Behavioral Regulation of Resupply and Advective Losses

## DATA MANAGEMENT PLAN

PI Pierson will lead the data management effort with support from the other PIs, technicians, and graduate students.

*Types of data to be produced:* Three general types of data will be produced for this project, in three basic categories:

1. **Zooplankton:** Data from net tows and Niskin bottle samples; vital rate experiments and observations (egg production and viability, mortality); calibration of ADCP backscatter data with zooplankton net data
2. **Hydrographic Data:** Electronic data generated from profiling CTD equipment and environmental sensors on the MOCNESS; water currents and backscatter information from ADCPs
3. **Model:** Model output of abundance and life history characteristics of *A. tonsa* lineages forced with climate projections and existing ROMS model output.

*Standards that would be applied for format, metadata content, etc.:* We will work closely with the proprietors of the data and the Biological-Chemical Oceanography Data Management Office (BCO-DMO: <http://www.bco-dmo.org/>) to ensure that data we collect and use in our analyses and outcomes from our syntheses are publicly available according to federal, NSF and institutional guidelines. Further, all data made available will be accompanied by FGDC compliant metadata.

*Provisions for archiving and preservation:* Zooplankton samples will be stored in 4% buffered formaldehyde in climate controlled storage facilities. Electronic hydrographic and ADCP data will be archived and backed up locally at HPL and then submitted to BCO-DMO. These data and associated metadata will include all calibration information necessary for post-processing. Additionally, a database containing the location of all materials, including electronic and physical samples, will be maintained for use by all PIs and eventually submitted with the data to BCO-DMO.

*Access policies and provisions:* Access to data will be given once the data is quality controlled and published. Availability will be in accordance with federal, NSF and UMCES institutional guidelines for data accessibility.

*Plans for eventual transition or termination of the data collection after the NSF funding period:* All data will be written up and submitted for publication. Publication costs will be used to make the article freely available for download. All electronic and plankton data will be submitted to BCO-DMO for archival in public databases (e.g. NODC: <http://www.nodc.noaa.gov/> and OBIS: <http://www.iobis.org/>). The modeling results we will generate will also be archived with BCO-DMO and we will work with that office to determine the best course of action for generating metadata and archiving those results in an appropriate form and repository. Additionally, metadata about the models themselves will be archived in an appropriate form. The BCO-DMO

“Best Practices Guide” ([http://bco-dmo.org/files/bcodmo/BCO-DMO\\_Guidelines.pdf](http://bco-dmo.org/files/bcodmo/BCO-DMO_Guidelines.pdf)) has no suggestions for archiving model data, so this presents an opportunity to work with that office to develop protocols and methods for archiving models and model results.

We will work closely with the physical oceanographic project so that simultaneously collected data have appropriate metadata to allow future comparison and proper archival.