

Data Management Plan

Oceanographic Data Types and Standards: Collectively, the PI's and collaborators will be responsible for coordinating data collection, data QA/QC, data sharing, and data archive. The primary types of observational data will include the following: nutrient concentrations and nitrate $\delta^{15}\text{N}$ and $\delta^{18}\text{O}$ from water samples collected quarterly at 44 stations along four monitoring lines in the SBUS.

Metadata for each of type of measurement will be collated into a single file. Submission of these data will be linked to the 2-db mean CTD-bottle data (pressure, temperature, salinity, calculated density, dissolved oxygen, fluorescence, turbidity and nutrients) that are generated by the IEP program, so that the data are in a useful format, both to us and to our colleagues who are interested in collaborating and sharing data.

The following products will also be generated from this project: 1) Idealized simulations of our experiments in the SBUS, and 2) A model hindcast of the SBUS with monthly average output. Each data product will contain ROMS output consisting of 4-dimensional (x,y,z,t) fields for ocean variables used in the project analysis. These variables will include temperature, salinity, oxygen, and nutrients.

Model data and metadata will be produced and uploaded in user-friendly forms to the BCO-DMO or University of Connecticut Library System data portals, in standardized format according to the data archiving center and/or as NetCDF files.

Policies for Access and Sharing: Within two years of collection and analysis, our **observational data** will be made available by sending the quality-controlled data to the BCO-DMO (*Biological & Chemical Oceanography Data Management Office*) following their submission guidelines. After unit conversion, quality control, and sample processing are complete, the data will be uploaded and made publicly available at <http://bcodmo.org/data>. The data can be downloaded in Excel, Matlab, *netcdf*, and ODV file formats.

Model output generated from this project will be accessible via the BCO-DMO within two years of collection, following the guidelines in the Division of Ocean Sciences (OSE) Sample and Data Policy. If the model output file sizes are too large for direct storage on BCO-DMO, then the data will be stored through the University of Connecticut's Library System, which is able to host large datasets with an associated DOI number. The data will then also be accessible on the BCO-DMO dataset page via a link that will direct the user to the dataset location on the University of Connecticut Library System.

Policies and Provisions for Data Use and Distribution: There will not be any permission restrictions placed on the data.

Plans for Internal Data Sharing: The investigators (Granger and Siedlecki, including Fawcett and Veitch), and graduate students, will communicate at least once a month using phone conferencing. All will share an internal website for data assimilation. Participants will meet annually at conferences to discuss project planning, progress, and experimental design. The graduate will also spend time at UCT to interact with collaborators Fawcett and Veitch. Jointly, these activities will ensure extensive communication among the project participants.