DATA MANAGEMENT PLAN

Assessing the origin of young black carbon across tropical Atlantic air, water and sediment using radiocarbon

Data Policy Compliance

We will work with the BCO-DMO and MGDS staff to manage the data; data generated during the proposed research project will be contributed to the BCO-DMO and MGDS systems.

Description of Data Types

Data will be generated for particles in sediment cores, water column and atmosphere in the laboratory:

- Concentrations of black carbon and total organic carbon
- Radiocarbon age of black carbon and total organic carbon
- ^{13}C isotope ratios of black carbon and total organic carbon
- Organic tracer concentrations of sediment layers, atmospheric particles and suspended solids.
- Underway geophysical data (CHIRP sub-bottom, ADCP, and seafloor mapping if available)

In addition, concentrations and radiocarbon age of dissolved black carbon will also be generated for water column samples.

Data and Metadata Formats and Standards

All concentrations generated will be assessed for QA/QC compliance. After completion of the QA/QC steps, the final data will be tabulated for all organic compounds together with coordinates, sampling date and depth. These will be shared with BCO-DMO. Data will be shared in Excel worksheets (.xls), containing latitude –longitude, depth and the various concentrations listed above. Underway geophysical data will be provided through the R2R pathway, and any processing of multibeam data (if collected) will also be provided to MGDS.

Data Storage and Access During the Project

The data will be stored on two independent computers – one linked to instrument generating the data (e.g., mass spectrometer for d13C and organic tracer analysis, etc), and at the graduate student's own computer. All data and meta files will be copied to at least one jump drive for separate storage. Additionally, the files will all be uploaded to Dropbox for independent backup.

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

The individual data will be shared within 2 years of their generation in the laboratory with BCO-DMO. Underway geophysical data will be made available immediately. URI has an open access policy; all data included in MS or PhD thesis, as well as in resulting publications is available to the public free of charge (http://digitalcommons.uri.edu). Any manuscript submitted resulting from the research funded by NSF-Chemical Oceanography will contain the original data as a supplementary file. These are generally available free of charge at the publishers websites.

Plans for Archiving

All data and meta files will be copied to several jump drives for separate storage. Additionally, the files will all be uploaded to Dropbox for independent backup. At least two copies of the final data will be stored – one by the graduate student, the other by the graduate student to minimize the risk of data loss. As noted above, original data will be available via the thesis publicly available at the University of Rhode Island.

Roles and Responsibilities

The PI Lohmann will have overall responsibility for Data Management and the proper execution of the Data Management Plan as outlined here. Lohmann will oversee the QA/QC and guarantee timely submission. The graduate student will produce the original data mentioned above and perform the formatting as required by the Biological and Chemical Oceanography Data Management Office.