

## **Data Management Plan**

All PIs will plan the overall sampling campaign. Individual responsibilities are outlined in the proposal and budget justification. Detailed plans for sample locations, irradiation and biodegradation timetables, water sampling strategy and water sample allocation, and the continuous in situ monitoring strategy will be written up as a science implementation plan. The actual sampling events and experiments will be recorded on paper logs (scanned into PDF documents), samples split and prepared for the required analyses. Where amounts of sample or dried/isolated dissolved organics exceed project requirements additional material will be archived and logged as part of the sample metadata. The continuous in situ data will be logged in situ by the various hardware supporting the instrumentation and then backed up at SkIO. Any gaps or drops in the quality of data will be logged electronically and the data flagged.

Data for this project will be generated at SkIO and the Max Planck Institute Marine Geochemistry Group, Oldenburg, Germany. The collected data will include in situ field data (water temperature, pH, CDOM UV-visible spectra etc.), dates and locations of sample collection, full chemical characterization data sets, and, where appropriate, experimental conditions to which samples were exposed. These data will be accompanied by detailed metadata files documenting relevant information about sample collection procedures, transport/handling procedures, analytical procedures, uncertainties, statistical treatment of the data, etc. Before submitting data to the archive, these data will be collated by the PIs and organized in Microsoft Excel spreadsheets. While the individual labs that generate the various data streams will be responsible for maintaining records of data quality (standard curves, measures of analytical error, etc.), the collated data will also be screened for anomalies. Where possible, re-analyses of archived samples will be completed to check anomalous values. Possible outliers included in the final, submitted data set will be flagged to alert subsequent data users.

The data generated will be submitted to the Biological and Chemical Oceanography Data Management Office (BCO-DMO) no more than one year after the above quality checks have been made. The BCO-DMO will thereafter manage the data sets and make them available online from the BCO-DMO data system (<http://bco-dmo.org/data/>). BCO-DMO will also archive all the data they manage at the appropriate national archive facility, such as NODC and NGDC. Prior to submission to the BCO-DMO, all data will be collated and managed at SkIO. Collection of the data at SkIO will provide a backup to the data storage systems at the other institutions.