Instrumentation at UW Friday Harbor Laboratories for Studies of the Biological Impacts of Ocean Acidification and Ocean Change

Data Policy Compliance

Identify any published data policies with which the project will comply, including the NSF OCE Data and Sample Policy as well as other policies that may be relevant if the project is part of a large coordinated research program (e.g. GEOTRACES).

The project investigators will comply with the NSF Division of Ocean Sciences Sample and Data Policy.

Pre-Cruise Planning

If the proposed project involves a research cruise, describe the cruise plans. (Skip this section if it is not relevant to your proposal.) Consider the following questions:

1. **How will pre-cruise planning be coordinated? (e.g. email, teleconference, workshop)**
2. **What types of sampling instruments will be deployed on the cruise?**
3. **How will the cruise event log be recorded? (e.g. the Rolling Deck to Repository (R2R) event logger application, an Excel spreadsheet, or paper logs)**
4. **Will you prepare a cruise report?**

N/A

Description of Data Types

Provide a description of the types of data to be produced during the project. Identify the types of data, samples, physical collections, software, derived models, curriculum materials, and other materials to be produced in the course of the project. Include a description of the location of collection, collection methods and instruments, expected dates or duration of collection. If you will be using existing datasets, state this and include how you will obtain them.

We report data collected from in situ sensors that have been calibrated by the manufacturer. A list of sensor models will be clearly identified on the BCO-DMO data system.

Data collection for various instruments begin at various dates. Our dataset begins around February 2018 and is ongoing. Some data gaps exist and differ for each instrument.

Data and Metadata Formats and Standards

Identify the formats and standards to be used for data and metadata formatting and content. Where existing standards are absent or deemed inadequate, these formats and contents should be documented along with any proposed solutions or remedies. Consider the following questions:

1. **Which file formats will be used to store your data?**
2. **What type of contextual details (metadata) will you document and how?**
3. **Are there specific data or metadata standards that you will be adhering to?**
4. **Will you be using or creating a data dictionary, code list, or glossary?**
5. **What types of quality control will be used? How will data quality be assessed and flagged?**

1. Text files (.txt) will be used.

2. We have provided GPS coordinates and some information about the exact location (e.g. on the floating dock at ~2-3 m water depth).

3. NO

4. Data descriptions will be provided in the metadata on the BCO-DMO data system.

5. No data is represented as 'nd'. Some data gaps exist and differ for each instrument.

Data Storage and Access During the Project

Describe how project data will be stored, accessed, and shared among project participants during the course of the project. Consider the following:

1. **How will data be shared among project participants during the data collection and analysis phases? (e.g. web page, shared network drive)**
2. **How/where will data be stored and backed-up?**
3. **If data volumes will be significant, what is the estimated total file size?**

1. Data are shared upon request. Some data will be available for download via the Friday Harbor Labs website.

2. Data are stored on a local workstation. Data are backed-up on a file server at Friday Harbor Labs.

3. The estimated total file size is ~44 MB for a zipped folder.

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

Describe mechanisms for data access and sharing, and describe any related policies and provisions for re-use, re-distribution, and the production of derivatives. Include provisions for appropriate protections of privacy, confidentiality, security, intellectual property, or other rights or requirements. Consider the following:

1. **When will data be made publicly available and how? Identify the data repositories you plan to use to make data available.**
2. **Are the data sensitive in nature (e.g. endangered species concerns, potential patentability)? If so, is public access inappropriate and how will access be provided? (e.g. formal consent agreements, restricted access)**
3. **Will any permission restrictions (such as an embargo period) need to be placed on the data? If so, what are**

the reasons and what is the duration of the embargo?

4. **Who holds intellectual property rights to the data and how might this affect data access?**
5. **Who is likely to be interested in re-using the data? What are the foreseeable re-uses of the data?**

1. Data will be shared publicly via the Biological and Chemical Oceanography Data Management Office (BCO-DMO) data system. Project investigators will work with BCO-DMO data managers to make project data available online in compliance with the NSF OCE Sample and Data Policy. Data and other information collected under this project can be made publically available without restriction once submitted to the public repositories.

Data produced by this project may be of interest to chemical and biological oceanographers, and climate scientists interested in the role of biogeochemistry in the global climate system. We will adhere to and promote the standards, policies, and provisions for data and metadata submission, access, re-use, distribution, and ownership as prescribed by the BCO-DMO Terms of Use (http://www.bco-dmo.org/terms-use).

Plans for Archiving

Describe the plans for long-term archiving of data, samples, and other research products, and for preservation of access to them. Consider the following:

1. **What is your long-term strategy for maintaining, curating, and archiving the data?**
2. **What archive(s) have you identified as a place to deposit data and other research products?**

BCO-DMO will serve as the primary data archive for this project.

Roles and Responsibilities

Describe the roles and responsibilities of all parties with respect to the management of the data. Consider the following:

1. **If there are multiple investigators involved, what are the data management responsibilities of each person**
2. **Who will be the lead or primary person responsible for ultimately ensuring compliance with the Data Management Plan?**

K. Sato and E. Carrington will serve as the primary contacts for this data. Friday Harbor Laboratories Staff members, K. Kull and J.D. Crosby will also assist with data requests.