

DATA POLICY COMPLIANCE

The project investigators will comply with the data management and dissemination policies described in the NSF Award and Administration Guide (AAG, Chapter VI.D.4) and the NSF Division of Ocean Sciences Sample and Data Policy.

DESCRIPTION OF DATA TYPES

The project will produce several experimental and technological datasets, described in the list below.

Experimental Datasets:

1. **Bleaching response data:** Photosynthesis and respiration measurements; *Symbiodinium* cell densities; PAM fluorometry; and reflectance and photo pixel intensity data.
Repository: BCO-DMO, datadryad
2. **Genetic sequence data:** *Symbiodinium* ITS2 sequences. Repository: NCBI GenBank

Technological Datasets:

1. **Arduino temperature controller code:** Repository: GitHub
2. **Experimental system design:** Repository: GitHub
3. **System assembly and operation:** Repository: YouTube

DATA AND METADATA FORMATS AND STANDARDS

Experimental data will be stored in flat ASCII files, which can be read easily by different software packages. Sequence data will be in .fasta format. Code will be in arduino language text files. Metadata will be prepared in accordance with BCO-DMO conventions (i.e. using the BCO-DMO metadata forms) and will include detailed descriptions of collection and analysis procedures.

DATA STORAGE AND ACCESS DURING THE PROJECT

The investigators will store project data (including spreadsheets, ASCII files, images, etc.) on laboratory computers that are backed up by the University's central IT organization.

MECHANISMS AND POLICIES FOR ACCESS, SHARING, RE-USE, AND RE-DISTRIBUTION

Biological samples, including coral specimens and extracted DNA will be shared freely upon request. Sequence data will be made publically available in a timely manner. Any code and experimental system design plans will be made publically available via GitHub and YouTube as soon as finalized.

PLANS FOR ARCHIVING

All tissue resources and extracted DNA samples will be stored at -80C at the collaborative institutions for a minimum of five years after the publication of results of this project. Information on individual samples, including species identification, sampling location, and other

pertinent data, will be digitized using Microsoft Excel and at least two backups stored away from the master copy. Backups will be stored on the laboratory computers/servers of the collaborative PIs of this project.

The project will be registered with the Biological and Chemical Oceanography Data Management Office [BCO-DMO] and all oceanographic data (and other data types as appropriate) will be formatted for broader dissemination, and redundancy.

ROLES AND RESPONSIBILITIES

All physiological data will be collected by both PIs. PI Barshis will be the lead on arduino code, genetic sequence, and system design data and information.