Data Management Plan for NSF proposal:

COLLABORATIVE RESEARCH: Predicting the global location of heat tolerant corals: Palau patch reefs as a general model

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
1. Genetic sequencing: mRNA and DNA sequences from animals collected in the field. Sequencing will be performed at commercial facilities outside Stanford. File types: Short-read archive (.sra), .fasta files for transcriptome assemblies and .fastq files for transcriptome reads. Repository: NCBI; accession numbers to be provided to BCO-DMO. 2. Temperature data collected on Hobo Loggers.
3. Physiological experiments carried out on corals under controlled heat conditions; dataset will include data on the experimental treatments and the observed bleaching rates. File types: ASCII Repository: BCO-DMO.
4. Measurements of corals in the field including, visual bleaching scores, chlorophyll content of branches, colony growth rates, and wound healing.

Data and Metadata Formats and Standards
• Field temperature data will be stored in flat ASCII files, which can be read easily by different software packages. Field data will include date, time, latitude, longitude. 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.
• Physiological and experimental and other field observational data will be stored in Excel spreadsheets.

Data Storage and Access During the Project
• The investigators will store project data (including spreadsheets, ASCII files, images, and sequencing files) on laboratory computers that are backed up by the Hopkins Marine Station central backup system.

Mechanisms and Policies for Access, Sharing, Re-Use, and Re-Distribution
• Immediately after completion of the field season, data and metadata will be submitted to the Rolling Deck to Repository (R2R) project. DNA sequences will be deposited in the National Center for Biotechnology Information (NCBI) database GenBank upon submission of manuscripts. GenBank accession numbers will be provided to the Biological and Chemical Oceanography Data Management Office (BCO-DMO) in an Excel spreadsheet or .CSV file and metadata will be provided using the BCO-DMO Dataset Metadata submission form. Data sets produced will be made available through the BCO-DMO data system within two-years from the date of collection. The 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, samples, 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 warming oceans 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
• R2R will ensure that the original filed-collected measurements are archived permanently at NODC and/or NGDC as appropriate. BCO-DMO will also ensure that project data are submitted to the appropriate national data archive. The PI will work with R2R and BCO-DMO to ensure data are archived appropriately and that proper and complete documentation are archived along with the data.

Roles and Responsibilities
• The PI will be responsible for sharing these data among the project participants in a timely fashion, and along with the postdoc employed on the project will oversee the molecular biology work and will submit the resulting sequences to the National Center for Biotechnology Information's (NCBI) GenBank database. The Lead PI and students will coordinate the overall data management and sharing process and will submit the project data, including GenBank accession numbers, and metadata within two years to the Biological and Chemical Oceanography Data Management Office (BCO-DMO) which will be responsible for forwarding these data and metadata to the appropriate national archive.

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