

DATA MANAGEMENT PLAN

Data Policy Compliance: All the coPIs will be responsible for creating and maintaining data. All project data will be stored on Drazen's lab server such that all data are accessible for project members and in addition to complying with the NSF OCE Data and Sample Policy.

Description of Data Types: This project will generate several types of data and samples including (1) dried tissue samples from marine organisms and particles from the Pacific, (2) amino acid nitrogen and carbon isotope analysis of water column particles, sediment trap material, sediments and marine organisms (3) bulk nitrogen and carbon stable isotope analysis for additional macrofauna and megafauna (4), specimen capture records (location, date, time, and all body measurements) and environmental measurements (e.g., water temperature, oxygen, salinity, depth), and (5) ^{234}Th : ^{238}U data from water and particles. Samples and subsamples will be physically archived in appropriate locations (e.g., freezers, climate-controlled facilities) for subsequent (re)analysis in PIs' laboratories.

Data and Metadata Formats and Standards: Data quality will be assured through proper analysis of replicate samples, certified reference materials, and blanks/controls. Our quality control protocols are stringent and we will discard data that do not meet all requirements. Data will also be archived in multiple locations, including hard copies, laboratory computers, and cloud-based servers. All data will be compiled in a commonly-used database management program, and metadata and primary data will be submitted to archiving data repositories as appropriate.

Experimental data and observations not appropriate for archiving in national data repositories will be reported in peer-reviewed publications, either as tabulated data in the publication or in supplementary data tables. Where appropriate, data will also be made available on laboratory websites for download. To increase accessibility to project data and the dissemination of our research findings—particularly among scientists from developing countries—we will make every effort to publish our results as open-access articles or within open-access journals. Ph.D. or M.S. theses associated with the project will also be made available electronically.

Data Storage and Access During the Project: Data and metadata will be stored via Drazen Lab servers for sharing among collaborators and stored at multiple locations including hard copies, laboratory computers and cloud-based servers.

Mechanisms and Policies for Access, Sharing, Re-use, and Re-distribution: We will share and archive data collected as part of this research project in compliance with the NSF Data Sharing Policy. Underway data collected aboard ship will be made available as soon as possible after each cruise by depositing it in the National Oceanographic Data Center database. Metadata will be deposited with the Biological and Chemical Oceanography Data Management Office (BCO-DMO) as the primary data management source. Inventories of data holdings will be included in publications with guidance for accessing the data. To increase accessibility and discoverability of project data and results, the PIs will make every effort to publish results via open access articles and journals (please see Budget Justification).

Plans for Archiving: All data collected by the project will be maintained, curated and archived in the BCO-DMO. All data will be publicly available within six months of the project end date. There are no ethical and privacy issues with the proposed data. The dataset from this project will not be copyrighted.