

Data Management Plan

Overview

The PIs are committed to the goal of making the highest quality data, metadata, and research summaries available to the scientific and management communities, and have a history of sound and productive data management (e.g. GOMRI's GRIIDC, search "Fodrie") to support this claim. Our management plan provides a mechanism for distributing data and metadata to researchers, students, coastal zone managers, and educational users as well as to the public.

1. Types of data produced

The proposed research will generate new data on fish assemblage structure (species identity, biomass, abundance) and environmental correlates (habitat area, fragmentation, wave energy). Ancillary work related to the overarching project goal may rely on existing seagrass distribution/mapping or wave energy data already publically available through corresponding government agencies (e.g., NOAA, APNEP). We will use these data in subsequent statistical exercises predicting fish assemblage structure based on environmental variables such as meadow size, degree of fragmentation within meadows, physical energy, etc.

2. Data and Metadata standards

For all data analysis and modeling, we will keep detailed notes on our work flow, including methods, troubleshooting, data exploration, and programs used, which will be shared among L. Yeager, J. Fodrie, and the PhD graduate student. These notes will be compiled using Microsoft Word, version controlled, and backed-up daily on widely used platforms such as Dropbox or Druvia inSync. Code will also be stored in a concurrent versioning system such as Git in order to allow all members of the research team to make and track modifications.

3. Policies for Access and Sharing

The PIs and PhD graduate student will have dedicated space on either UNC's and SESYNC's internal servers (based on each person's home institution) for the storage and processing of all data. At both facilities, these storage servers and all computers are backed-up twice daily. All files will also be backed-up weekly on an external hard-drive and taken off-site nightly. All code used for data processing and analysis will also be backed-up and shared using GitHub.

4. Policies for revision and reuse

For any data produced during the work, the PI's will retain the rights to the data until publication or within two years, whichever is sooner.

5. Plans for archiving

We anticipate publishing all raw data, code, model outputs, and results of simulations along with corresponding manuscripts. This will be made open in online supplements (e.g., Ecological Archives). We will also publish all data to The Biological and Chemical Oceanography Data Management Office (BCO-DMO) data archiving repository with corresponding metadata.