

Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

1.1. Name of the Data, data collection Project, or data-producing Program:

Ocean acidification impacts on black sea bass and scup embryos, responses of finfish in laboratory experiments

1.2. Summary description of the data:

Black sea bass (*Centropristis striata*) and scup (*Stenotomus chrysops*) compose important recreational and commercial fisheries along the United States Atlantic coast. Black sea bass is a temperate species, associated with reef habitat. Wild stocks and landings have been decreasing in recent decades. The demand for black sea bass exceeds supply, and the high market value has prompted research to evaluate their potential for commercial aquaculture. Recent studies conducted at the National Marine Fisheries Service, Milford, CT laboratory examined growth rates of juvenile scup fed commercial diets. This and other on-going studies at Milford have shown scup to acclimate quickly to tank conditions in the laboratory, and to exhibit rapid growth rates. These studies indicate the possibility that scup have potential as a candidate species for commercial aquaculture. Studies with both fish species suggest they are interesting species for studies of the effects of ocean acidification because of their economic importance as fisheries species. These studies focused on laboratory-based experiments to measure the biological effects of elevated levels of CO₂ on embryos of these important marine finfish. Adult black sea bass were naturally conditioned and spawned in the laboratory by photo-thermal manipulation. Adult scup were strip-spawned at sea and their eggs were fertilized at sea. The fertilized eggs of both species of fish were exposed to two treatment levels of pCO₂ and one control level, with three replicates per treatment and the controls. Measurements of biological effects included percent hatch, viable embryos, abnormal embryos, and dead embryos. Measurements of dissolved oxygen concentration, percent oxygen saturation, temperature, salinity and pH were taken daily in each treatment container and the controls. Samples of seawater were taken at the time of initial experimental setup and at the time of hatching from each container for analyses of dissolved inorganic carbon (DIC), and analyses of pH by spectrometry.

1.3. Is this a one-time data collection, or an ongoing series of measurements?

One-time data collection

1.4. Actual or planned temporal coverage of the data:

2013-07 to 2015-07

1.5. Actual or planned geographic coverage of the data:

Mid-Atlantic region of Northwest Atlantic Ocean, Long Island Sound, Connecticut

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)

Table (digital)

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:

Dylan Redman

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:

Dylan.Redman@noaa.gov

2.5. Phone number:

203-882-6518

3. Responsible Party for Data Management

Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

Dylan Redman

3.2. Title:

Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

Yes

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

Unknown

5. Data Lineage and Quality

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Lineage Statement:

none

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

Data validation during data collection and entry: Every sample was analyzed by two scientists for comparison of reliable, consistent results. Portable pH meter used for comparison with UV spec. data.

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:

- 1.7. Data collection method(s)

- 7.2. Name of organization of facility providing data access

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

<https://www.fisheries.noaa.gov/inport/item/25107>

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

Yes

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:

7.2.1. If data hosting service is needed, please indicate:

Yes

7.2.2. URL of data access service, if known:

https://console.cloud.google.com/storage/browser/nmfs_odp_nefsc/PARR/EAD/ASEB/25107

7.3. Data access methods or services offered:

NEFSC Data Access Procedure:

1. Formal request in writing usually to the data owner/contact or Center Director;
2. Requester is contacted by data owner to review and verify the request content and details for data delivery options.
3. If data is confidential then owner will determine if the data may be released to the requester;

4. If data can be released, the data is downloaded and packaged for delivery electronically; or the requester may be directed to where the data is available online.

7.4. Approximate delay between data collection and dissemination:

not applicable

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:

(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

NCEI_MD

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):

NEFSC Milford Lab - Milford, CT

8.3. Approximate delay between data collection and submission to an archive facility:

Unknown

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

Archival of source data preserving unaltered collected data.

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.