

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:

Baseline assessment of fish and benthic communities of the Flower Garden Banks (2010 - present) using remotely operated vehicle (ROV) survey methods: 2011

1.2. Summary description of the data:

The proposed work develop baseline information on fish and benthic communities within the Flower Garden Banks National Marine Sanctuary (FGBNMS). Surveys will employ diving, technical diving, ROV, and hydroacoustics technologies for a comprehensive assessment of the fish and benthic habitat communities of the East and West Bank. The FGBNMS represents the northernmost tropical western Atlantic coral reef on the continental shelf and support the most highly developed offshore hard bank community in the region. The complexity of habitats supports a diverse assemblage of organisms including approximately 250 species of fish, 23 species of coral, and 80 species of algae in addition to large sponge communities. Understanding and monitoring these resources is critical to both sanctuary inventory and management activities. During the course of the sanctuary's management plan review process, the impact of fishing was identified as a priority issue, and the concept of a research only area was suggested. The purpose of this project will be to provide baseline data for all benthic habitats and communities.

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

Ongoing series of measurements

1.4. Actual or planned temporal coverage of the data:

2010-05 to Present

1.5. Actual or planned geographic coverage of the data:

W: -93.82, E: -93.59, N: 27.92, S: 27.87

1.6. Type(s) of data:

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

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:

NCCOS Scientific Data Coordinator

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:

NCCOS.data@noaa.gov

2.5. Phone number:

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:

NCCOS Scientific Data Coordinator

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?

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

Process Steps:

- 2010-09-01 00:00:00 - A stratified random sampling design was employed to sample fish and benthic communities with a remotely operated vehicle (ROV) in the sanctuary at depths greater than 150 feet. A sample frame consisting of mutually-exclusive 200m X 200m grid cells was produced and overlaid on the existing benthic habitat map to exhaustively cover all habitats. Each grid cell was considered a sample unit and units were divided into eight strata. Strata were defined using benthic habitat, and location (East or West Bank). Benthic habitats include: coralline algal reef, deep reef, algal nodule, and soft bottom. Data were collected within 100m² transects. Transects radiated from the centroid of each sample unit at a random bearing. Once in the field, the boat captain navigated to previously selected sites and the ROV was launched. The ROV has GPS positioning so it can be deployed on a site and navigate to other sites without having to be brought back aboard the vessel. Once deployed, high resolution video cameras are continuously running. Once the station has been reached, the ROV slows to approximately 1 knot and attempts to run along a predetermined heading. If currents are too strong, the transect is run into the current to maintain stability. If the current is too strong the transect is aborted. The video is fed into the vessel and scientists take notes about fish and benthic communities as the ROV conducts the transect. Every 30 seconds the ROV slows and hovers approximately 3 m off the bottom. A digital still photograph is taken of the bottom, then the transect continues. Fish and benthic analysis are conducted back in the lab upon the completion of the cruise. Data were collected on the following: 1) Logistic information - date, time of survey, site code, transect bearing, depth. 2) Abundance & size - Fish were identified to the lowest possible taxon possible and the number of individuals per species is tallied in 5cm size class increments up to 35cm using visual estimation of fork length. If an individual is greater than 35cm, then an estimate of the actual fork length is recorded.

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):

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:

- 1.6. Type(s) of data
- 1.7. Data collection method(s)
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
 - 7.1.1. If data are not available or has limitations, has a Waiver been filed?
 - 7.1.2. If there are limitations to data access, describe how data are protected
- 7.2. Name of organization of facility providing data access
 - 7.2.1. If data hosting service is needed, please indicate
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

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/39308>

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?

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:

7.2.2. URL of data access service, if known:

7.3. Data access methods or services offered:

Contact Emma Hickerson at Flower Garden Banks National Marine Sanctuary to request data. Emma.Hickerson@noaa.gov or 409-621-5151;

7.4. Approximate delay between data collection and dissemination:

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)

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):

National Centers for Coastal Ocean Science - Silver Spring, MD

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

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

9. Additional Line Office or Staff Office Questions

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