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:

National Coral Reef Monitoring Program: Assessment of coral reef benthic communities in Puerto Rico from 2014-05-19 to 2014-12-03 and from 2016-06-07 to 2017-09-15 (NCEI Accession 0224418)

1.2. Summary description of the data:

The National Coral Reef Monitoring Program (NCRMP) assessed coral reef communities in Puerto Rico using two benthic surveys: the Benthic Assessment (BA) and the Coral Demographic method. Benthic Assessment provides benthic cover estimates for ecologically important cover types/groups (e.g., macroalgae, turf algae, crustose coralline algae, corals, sponges, sand/sediment, etc.) using a 1-stage stratified random survey design in hardbottom and coral reef habitats less than 30m in depth. The goals of these surveys are to provide: (1) a quantification of percent cover of biotic and abiotic benthic components using a line point-intercept (LPI) method; (2) information on topographic complexity substratum rugosity) of the survey locations (3) quantitative information on local commercially and ecologically-important macroinvertebrates (Caribbean spiny lobster [Panulirus argus], queen conch [Lobatus gigas], long-spined sea urchin [Diadema antillarum]); and (4) presence-absence information for ESA-listed Threatened corals. The goal of the coral demographic surveys is to collect and report information on species composition, density, size, abundance, and specific parameters of condition (% live vs. dead, bleaching, disease) of non-juvenile scleractinian corals (>4 cm maximum diameter), and of overall species diversity (all corals) using 10m x 1m belt transects in a stratified random sampling design in hardbottom and coral reef habitats less than 30m in depth. Both Benthic Assessment and Coral Demographic surveys are concurrent. Three datasets are provided under the Benthic Assessment and coral demographic protocols, and are distributed as one compiled package: (1) analysis ready benthic cover dataset, (2) analysis ready invertebrates/ESA dataset, and (3) analysis ready coral demographic dataset. The methodologies used for this survey can be found in the Benthic Assessment and Coral Demographic protocols. All datasets contain data fields on general station information (e.g., survey strata, depth, rugosity). Each of these data tables contain additional survey-specific data fields. For complete information and descriptions of attributes and data fields for all data tables, refer to the data dictionaries.

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:
2014-05-19 to 2017-09-15

1.5. Actual or planned geographic coverage of the data:
W: -67.949417, E: -65.193576, N: 18.5190915, S: 17.862056

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Multimedia (hardcopy)

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:
Sarah Hile

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:
sarah.hile@noaa.gov

2.5. Phone number:
240-533-0370

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:
Laura Grove

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):

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):

Quality control procedures are implemented in four main stages:

(1) ongoing routine training of observers (initial detailed training, annual refresher training);

(2) data check following data collection, where divers trade datasheets immediately upon returning to Data Documentation

(3) independent reviewers compare datasheets with database entries; and

(4) statistical analyses are conducted as the final check before distribution.

Before implementation the sampling design was reviewed and agreed upon by

representatives from program partners, as well as NCCOS scientists

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)
- 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
- 5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible
- 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
- 7.4. 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/70733

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:
National Centers for Environmental Information - Silver Spring, Maryland (NCEI-MD)

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

7.2.2. URL of data access service, if known:
https://www.ncei.noaa.gov/archive/archive-management-system/OAS/bin/prd/jquery/accession/down

7.3. Data access methods or services offered:
Download from provided links

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 Environmental Information - Silver Spring, Maryland - 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.