

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:

NOAA Point Shapefile- Benthic Habitat Classifications from Phantom S2 ROV Underwater Video, US Virgin Islands, Project NF-06-03, 2006, UTM 20N WGS84

1.2. Summary description of the data:

This dataset contains a point shapefile with benthic habitat classifications of vertical relief, geomorphological structure, substrate, and biological cover for selected points along various Remotely Operated Vehicle (ROV) underwater video transects in the US Virgin Islands and Puerto Rico. NOAA's NOS/NCCOS/CCMA Biogeography Team, in collaboration with NOAA vessel Nancy Foster and territory, federal, and private sector partners, acquired Remotely Operated Vehicle (ROV) underwater video data offshore of Buck Island, St. Croix, US Virgin Islands and off of LaParguera, Puerto Rico from 3/21/06 to 4/2/06. Data was acquired with a Phantom S2 ROV operated by NOAA's National Undersea Research Program (NURP) and georeferenced and visually interpreted by CCMA employees. Data is in UTM zone 20N, datum WGS84.

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:

2006-03-21 to 2006-04-02

1.5. Actual or planned geographic coverage of the data:

W: -67.08639, E: -64.565639, N: 17.892713, S: 17.793566

1.6. Type(s) of data:

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

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:

- 2006-03-01 00:00:00 - Data Acquisition: The NOAA ship Nancy Foster was used to collect underwater video and still photographs of benthic habitats from 3/21/06 to 4/2/06. The 36 ROV transects collected traversed over 70 km. Transect placement was designed for use in both accuracy assessment and ground truthing video (.wmv) and high-resolution digital still photographs (.jpg) were acquired using a downward pointing camera mounted on a Spectrum Phantom S2 Remotely Operated Vehicle (ROV) operated by an experienced team from NURP. Video was collected continuously and still photographs were collected every 30 seconds. The ROV followed pre-determined transect lines and was self-propelled as much as possible, but was towed by the NANCY FOSTER using a 1 inch steel cable when conditions prohibited self-propulsion. The camera height off the bottom was kept consistent at approximately 2m and the ROV speed was maintained at 1 meter/second. Most transects were run during daylight hours to guarantee sufficient ambient light levels for visual interpretation, but high powered strobe lights mounted on the ROV were available to supplement ambient light and during occasional night operations. Downward pointing parallel lasers (5cm separation) were used as scale references. Video and still photographs were transmitted via the ROV cable to shipboard hard drives as they were acquired. An ROV-mounted transducer and an acoustic receiver suspended off the side of the ship were used to determine the ROV's relative position to the ship, while the ROV's absolute geographic position was estimated using this relative position and the shipboard GPS. The positional accuracy was estimated to be within 5 m.

- 2006-04-01 00:00:00 - Benthic Habitat Interpretation: The benthic habitat was characterized by visual interpretation of both video images and still photographs by three CCMA interpreters. Interpretations were standardized among interpreters by repeatedly interpreting the same still photos and video until structure classes were the same and percent covers were within 5% of each other. After the initial standardization, interpreters were assigned random transects to reduce any possible regional bias. Video was used to interpret broad-scale structure and substrate rugosity, since still photos were incapable of providing this data due to their relatively small and top-down field of view. The still photos were used to estimate the percent cover of finer-scale substrate and biological cover components of the benthic habitat. Structure referred to the broad-scale habitat class within the entire field of view. Based on previous benthic habitat work in the area (Kendall et al., 2001 and the NF-04-06 NANCY FOSTER mission) the structure designation was chosen from either 1) colonized pavement, 2) colonized pavement with sand channels, 3) patch reef, 4) spur and groove, 5) scattered coral and rock in sand, or 6) unconsolidated. Substrate described the visible abiotic components of the benthic habitat. The four substrate classes, considered mutually exclusive and exhaustive were 1) consolidated material, 2) sand, 3) rubble (particles ~ 2-10 cm) and 4) rhodoliths. Substrate was measured to the nearest percent of the visible bottom. An estimate of rugosity was approximated by the vertical range of substrate in the field of view and was classified as either high (> 1m), moderate (< 1m and >0.3m), or

low (<0.3m). Biological cover referred to the biotic component of the seafloor and was divided among five mutually-exclusive categories differentiated by their size and shape. These were 1) sponge (Phylum Porifera), 2) gorgonian and black coral (Subclass Octocorallia and subclass Ceriantipatharia), 3) hydrocoral and stony coral (Subclass Hexacorallia), 4) fleshy algae and 5) algae veneer/turf. The sum of all cover categories provided an estimate of total colonization. If a biological cover component could not be unquestionably identified as one of the five cover categories it was only added to the total colonization estimate. Photo stills were viewed in ESRI's ArcMap software (ArcGIS 9) with a superimposed 10 X 10 grid shapefile to aid percent cover estimations. Video was viewed simultaneously on a second monitor using windows media viewer. Interpretation results were entered into an EXCEL spreadsheet using a custom VBA script, with a single record for each sample point (i.e. every still photograph taken at 30 second intervals). These sample points and their associated benthic habitat attributes were then imported in ESRI ArcMap and joined into point shapefiles.

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:

- 1.7. 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
- 7.3. Data access methods or services offered
- 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/38843>

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:

<http://coastalscience.noaa.gov/projects/detail?key=263>

7.3. Data access methods or services offered:**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.