

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 TIFF Image - 1 m Backscatter Mosaic of Abrir La Sierra Bank, PR (2007) collected using a Kongsberg EM 1002 (95 kHz) multibeam echosounder

1.2. Summary description of the data:

This image represents a 1 meter resolution backscatter mosaic of the Abrir La Sierra Bank off the coast of western Puerto Rico, collected using a Kongsberg EM 1002 (95 kHz) multibeam echosounder. NOAA's NOS/NCCOS/CCMA Biogeography Team, in collaboration with NOAA vessel Nancy Foster and territory, federal, and private sector partners, acquired multibeam bathymetry data in the U.S. Caribbean from 4/14/07 to 4/24/07. Data was acquired with a hull-mounted Kongsberg Simrad EM 1002 multibeam echosounder (95 kHz) and with a moon pool-mounted Reson 8124 multibeam echosounder (200 kHz). It was processed by a NOAA contractor using CARIS HIPS software. Data has all correctors applied (attitude, sound velocity) and has been reduced to mean lower low water (MLLW) using final approved tides from NOAA COOPS. Data is in UTM zone 19 north, datum NAD83. The backscatter component of the bathymetry data were geometrically and radiometrically corrected using Geocoder 3.0 software. Acoustic backscatter mosaics are ostensibly an important piece of information when characterizing surficial seafloor features and delineating benthic habitats. The project was conducted to meet IHO Order 1 and 2 accuracy standards, dependent on the project area and depth. All users should individually evaluate the suitability of this data according to their own needs and standards.

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:

2007-04-14 to 2007-04-24

1.5. Actual or planned geographic coverage of the data:

W: -64.784731, E: -64.429961, N: 17.854155, S: 17.761391

1.6. Type(s) of data:

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

remote-sensing image

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:

- 2007-01-01 00:00:00 - For this project, the Chief Scientist was NOAA/NOS/NCCOS/CCMA's Tim Battista and the Lead Hydrographer was independent contractor Mike Stecher. Data was collected aboard the NOAA ship Nancy Foster from 4/14/2007 to 4/24/2007, as project number NF-07-03. Multibeam data was acquired in: 1) Simrad .all format with a hull-mounted Kongsberg Simrad EM 1002 multibeam echosounder (95 kHz); and 2) .xtf format with a moon pool-mounted Reson 8124 multibeam echosounder (200 kHz). Both MBES systems had backscatter snippet collection enabled. Line spacing for acquisition was three times the water depth (for the EM 1002) and 3.5 times the water depth (for the Reson 8124). Data was retained out to 60 degrees from nadir, depending on project area. Heave, roll, pitch and heading correctors were collected using an Applanix POS/MV Model 320 inertial measurement unit (IMU) and associated Trimble GPS antennas. Sound velocity profiles were acquired with a Seabird Electronics SeaCat SBE-911 and SBE19P CTD profilers and processed using Seabird Seatern software. Positioning was obtained using Northstar 941X GPS receivers with differential correctors from U.S. Coast Guard CORS beacon Isabel, Puerto Rico. Data was reduced to Mean Lower-Low Water (MLLW) using final approved tides from NOAA COOPS, based on National Water Level Observation Network (NWLON) primary tide stations at Charlotte Amalie, VI (9751639) and Lime Tree Bay, VI (9751401). | Source Produced: NF-07-06 Raw Multibeam Data (Citation: NF-07-06 Raw Multibeam Data)
- 2007-01-01 00:00:00 - Raw SWMB data were converted and processed using CARIS HIPS v6.1 software, resulting in a CARIS HDCS format dataset with all correctors applied. Attitude and SWMB data was cleaned of fliers, and SWMB data was reviewed in subset mode by a NOAA contractor. | Source Produced: NF-07-06 HDCS Processed Multibeam Data (Citation: NF-07-06 Raw Multibeam Data)
- 2007-11-01 00:00:00 - Acoustic backscatter mosaics are ostensibly an important piece of information when characterizing surficial seafloor features and delineating benthic habitats. The multibeam backscatter data were corrected for geometric and radiometric distortions using Geocoder 3.0. In particular, the following corrections were applied where appropriate and when artifacts were evident: AVG Trend, TX Power and RX Gain, Area Correction, Spreading, Slant-Range and Extracted Beam Pattern. As no theoretical beam pattern for the Kongsberg Simrad 1002 system exists, it was extracted from a mapped area that was flat and had a relatively uniform (sandy) substrate. Individual lines were also truncated based on ping number and/or angle of incidence where appropriate. The final mosaics were exported as geotiffs, ASCII and XYB files (i.e., X,Y locations in

NAD 1983 UTM Zone 19N and Backscatter values as measured in decibels dBs).
Holidays (missing data values) were filled using a nearest neighbor resampling technique. | Source Produced: BackscatterEM1002_AbrirBank_1m_2007.tif (Citation: NF-07-06 HDCS Processed Multibeam Data)

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
- 7.4. 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/38845>

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:

Click on link from project page to NCEI archive and download zip file.;

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.