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:

Caribbean Reef Fish Survey

1.2. Summary description of the data:

The Southeast Fisheries Science Center Mississippi Laboratories conducts standardized fisheries independent resource surveys in the Gulf of Mexico, South Atlantic, and U.S. Caribbean to provide abundance and distribution information to support regional and international stock assessments. A standardized reef fish survey is conducted in the U.S. Caribbean every 2nd or 3rd year with the objective of determining the relative abundance of reef fish on the shelf waters of Puerto Rico and the U.S. Virgin Islands. This survey uses video cameras, fish traps and vertical line gear, with approximately 200 video cameras, 200 vertical line and 100 traps conducted. The camera array consists of four housings positioned orthogonally and center mounted at a height of 51 cm above the bottom of the array. Each housing contains a pair of black-and-white Videre stereo cameras along with a color mpeg camera. Sampling of reef sites with video cameras occurs only during daylight hours, with the first gear deployment one hour after sunrise and the last gear retrieval one hour prior to sunset. Video arrays are soaked for 35 minutes. At sites selected for fish sampling, a chevron (or arrow) fish trap or vertical line is used to capture fish for biological samples. The chevron fish trap is constructed with 1.5-inch vinyl-clad mesh. In its greatest dimensions, the trap is 1.76 m in length, 1.52 m in width and 0.61 m in depth. A 0.4 m by 0.29 m blow out panel is placed on one side and kept closed using 7-day magnesium releases. The fish trap soaks for one hour and is baited with squid. The vertical line consists of a mainline with 10 gangions attached that is either deployed or attached to the vessel. One 8/0, 11/0 or 15/0 circle hook is attached to each gangion and baited with mackerel (Scomber scombrus). The mainline is soaked for five minutes. Most of the animals captured are measured, weighed, tagged and then released. Those individuals which are moribund or have expired are retained to collect biological data pertaining to the life history of these fishes. Habitat mapping is conducted using the SIMRAD ME70 multibeam echosounder. At each site hydrological data is collected using Conductivity Temperature Depth sensor (CTD).

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:
2009 to Present

1.5. Actual or planned geographic coverage of the data:
W: -68, E: -64.5, N: 18.6, S: 17.5
U.S. Caribbean Sea - Puerto Rico and U.S. Virgin Islands

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Document (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:
Matthew D Campbell

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:
matthew.d.campbell@noaa.gov

2.5. Phone number:
228-549-1690

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:
Matthew D Campbell

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"):

0

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:
Step 1. Reef fish abundance data are generated from videos. Step 2. An index of abundance for each species is determined as the MaxNo, the maximum number of a taxon that is in the field of view in a single video frame. Fish lengths are determined using stereo video processing. Step 3. Fish are captured using either fish traps, bottom longlines or bandit gear. Step 4. Fish otoliths are removed to determine age. Step 5. Data are entered into the database.

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):

Validation routines are applied during data entry to ensure the integrity of data collected. Data validation routines are also applied as data is migrated into the centralized system. Chief biologists review the data for content to ensure the relevance/ accuracy of data collected during the survey. Video reads undergo a QAQC process to ensure accuracy.

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)

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/29425

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:

Southeast Fisheries Science Center (SEFSC)

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

Yes

7.2.2. URL of data access service, if known:

7.3. Data access methods or services offered:

Contact the individual identified as the distributor for this dataset. Please include the title of the dataset and the name of the data steward when requesting a copy of this data.

7.4. Approximate delay between data collection and dissemination:

30 Days

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_MS

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):

Mississippi Laboratory - Pascagoula, MS

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

365 days

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

Data resides in the laboratories' centralized database (Oracle). Security patches are applied to the database and host environment immediately after their release. In addition, Security benchmarks are applied to the database and host environment. Data residing in the centralized database (Oracle) is backed up nightly. Backup sets are placed on the laboratories' Networked Attached Storage (NAS) environment. Security patches/updates are immediately applied to the host environment. Data is stripped/ mirrored using RAID 50 technology to protect data from disk failure. Nightly backups are preformed and files are written to magnetic tape and stored in an onsite / offsite location.

9. Additional Line Office or Staff Office Questions

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