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:
Fish survey data from Uva Island reef, Panama

1.2. Summary description of the data:
This project examines an eastern Pacific fish assemblage associated with a 2.5 hectare coral reef located within the boundaries of Coiba National Park, Panama. From 1980 to 2010, consistent, quantitative coral reef and fish survey monitoring methods have been applied at Uva Island reef, which lies in area that has received virtually no fishing pressure or watershed development over the past 80 years. Data stored in Excel files.

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:
1980-01 to 2010-12

1.5. Actual or planned geographic coverage of the data:
W: -81.8633, E: -81.6667, N: 7.8333, S: 7
Uva Island reef, Panama

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Table (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:
Joseph E Serafy

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:
joe.serafy@noaa.gov

2.5. Phone number:
305-361-4255

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:
Joseph E Serafy

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?
No

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):
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:
- 2011-05-01 00:00:00 - Coral monitoring. Assessment of coral cover on the Uva reef began in 1974 (Glynn 1976) and has continued to 2010. This was accomplished by chain transects and by sampling fixed 1 m2 plots (n = 10) as well as a single 4 x 5 m2

plot bordering the fish transects. The 4 x 5 m plot was established by R.H. Richmond immediately following the 1982-83 ENSO event when coral cover on the fore-reef was reduced to near-zero values. For this study, percent coral cover was determined only from the 4 x 5 m fixed plot. Benthic composition of 1 m2 sections were drawn by divers underwater and then digitized in the lab using a flatbed scanner, Adobe Photoshop and ImageJ software. Percent coral cover was determined by dividing the number of pixels representing coral within a quadrat by the total number of pixels in that quadrat. For each year, all 20 1 m2 quadrats within the 4 x 5 m plot were averaged to determine the total mean percent coral cover. Fish monitoring. Fish species numbers and abundances were quantified via snorkeling along the NW (seaward) side of the Uva Island patch reef. The surveys were conducted along 20 x 40 m transects with the longest axis oriented in the NW-SE direction, i.e., along the depth gradient and perpendicular to the zonation of fore-reef corals. The shallow ends of the transects were located in abundant pocilloporid growth (with scattered reef frame blocks) of relatively high relief; the central sections were dominated by live stands of Pocillopora spp. of low relief; the deep ends contained mostly coral rubble with a few isolated patches of massive corals. These substrate zonation patterns characterized the transect areas when sampling was first conducted. Live coral cover returned gradually from near complete loss following the 1982-83 El Ni¿o to pre-disturbance levels as of March 2010. All surveys were conducted at or near high tide. At this time, the shallow ends of the transects were 3-4 m deep and their deep ends 5-7 m. The spring tidal range in this area is 3.3 m. Surveys were conducted when the lateral visibility was =10 m. Snorkeling was carried out along the major axis of transects in a straight line pattern to permit a clear view of the transect boundaries. Fish counts were made by snorkeling slowly, avoiding quick movements or splashing, down the long axis of the transect. Species and abundance of individuals > 15 cm total body length present within the transects were recorded on a slate. Sampling time was standardized at 8 minutes per transect (per 800 m2). The sides of adjacent transects were separated by 3 m and the time interval between successive visual sampling was approximately 5 minutes. Fishes did not seem to be either attracted or repelled by the observer. (Citation: LONG-TERM PATTERNS OF DIVERSITY AND ABUNDANCE IN AN EASTERN PACIFIC REEF FISH ASSEMBLAGE: REEF FISH RESPONSE TO CORAL RECOVERY)

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):
Samples were taken over various days and times to ensure that values observed were not influenced by date or time or observer/recorder of the data

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/24251

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:
NOAA National Centers for Environmental Information (NCEI)

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:
All data Set files are present in downloadable zip file

The files format of the data files are defined in the metatdata.

7.4. Approximate delay between data collection and dissemination:
Already disseminated

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_MD

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

NCEI archive

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

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
It is already archived

9. Additional Line Office or Staff Office Questions

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