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:

Benthic Surveys in Faga'alu, American Samoa: comprehensive assessment of coral demography (adult and juvenile corals) from belt transect surveys in 2013, 2015, and 2020

1.2. Summary description of the data:

The data described here result from benthic coral demographic surveys within belt transects of specified length and width for two life stages (juveniles and adults) in Faga' alu, American Samoa in 2013, 2015, and 2020. The data provide information on adult coral colony counts, morphology, size, partial mortality (old and recent dead), presence and causation of disease and other compromised health conditions, including bleaching. Juvenile colony surveys include morphology and size. Taxonomic identification of adult colonies is to the species level and genus level for juveniles.

In 2013 and 2015, the survey implemented a two-stage stratified random sampling (StRS) design to assess the Faga'alu coral reef community, and a one-stage StRS design in 2020. The survey domain encompassed the majority of the mapped area of reef and hard bottom habitats in the 0–30 m depth range. The stratification scheme included cardinal position (i.e., north and south), reef zone (i.e., backreef and forereef) and depth (i.e., shallow: >0–6 m and mid-depth: >6–18 m). Sampling effort allocation was determined based on strata area and sites randomly located within strata. The StRS design effectively reduces estimate variance through stratification using environmental covariates and by sampling more sites rather than more transects per site. Therefore, site-to-site comparisons should proceed with caution.

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:

2013-04-01 to 2013-04-10, 2015-10-29 to 2015-11-11, 2020-01-15 to 2020-01-29

1.5. Actual or planned geographic coverage of the data:

W: -170.68277777778, E: -170.675, N: -14.28722222222, S: -14.295

Location of Rapid Ecological Assessment (REA) surveys in Faga'alu in 2013, 2015, and

2020

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:
Brooke Olenski

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:
brooke.olenski@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:
Bernardo Vargas-Angel

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"):

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):

Lineage Statement:

The data described here were collected via belt transect surveys of coral demography (adult and juvenile corals) by the NOAA Coral Reef Ecosystem Program (CREP): 2013: belt transect surveys of corals (version c) with individual colony counts. 2015-2020: belt transect surveys of adult corals (version e) with individual colony counts and health condition cause codes, and belt transect surveys of juvenile corals (version f) with individual colony counts

Process Steps:

- Biological surveys implemented a modified stratified random sampling design to assess the survey domain which encompassed the hard-bottom reef habitat from 0 to 18 m in depth within Faga'alu Bay. Based on the geomorphology of the reef, the stratification scheme combined two reef zone categories (backreef and forereef) and cardinal positions (north and south) into four distinct strata: i.e., backreef north, backreef south, forereef north, and forereef south. A digital map of the survey domain was overlaid with a 30 m × 30 m (900 m2 in area) GIS layer, and grid cells containing hard-bottom reef habitat were designated as the sampling units, hereafter referred to as survey sites. Sampling effort allocation was relative to strata area and sites randomly assigned within each stratum. Belt-transects were the focal point of the biological surveys. Coral community composition was assessed within a number of 1.0 m × 2.5 m segments located at the 0–2.5 m, 5.0–7.5 m, 10–12.5 m, 15–17.5 m, and 20–22.5 m mark along each transect; bottom-time permitting, covering a total area ranging 5–12.5 m2 per transect. Over time, protocols were adjusted to increase efficiency such that two, 25-m transects were implemented in 2012/2013, two 18-m transects in 2015, and one 18-m transect in 2020. Within segments, all adult coral colonies (≥5 cm maximum diameter) whose center fell within 0.5 m on either side of the transect line were identified to the genus-level and measured for size (maximum diameter to nearest cm). Juvenile coral colonies (< 5 cm), distinguished by the presence of a distinct tissue and skeletal boundary (not a fragment of a larger colony), were surveyed within three 1.0 m × 1.0 m segments at the 0–1.0 m, 5.0–6.0 m, and 10.0–11.0 m mark of each transect (covering 3 m2 per transect). Juvenile colonies were identified to genus and measured for size (maximum diameter to nearest 5 mm). In addition, still photographs were

collected were taken every 1 m to record the benthic community composition at predetermined points along the same transect(s) lines with a high-resolution digital camera mounted on a pole. This work generates 30 photographs per site, which are later analyzed by CREP staff and partners using the computer program CoralNet. This analysis is the basis for estimating benthic cover and composition at each site. These data are documented separately. Survey protocols followed the National Coral Reef Monitoring Program methodologies historically implemented by NOAA's Ecosystem Sciences Division. (Citation: Status and Trends Assessment for Land-based Sources of Pollution Impacts on Benthic Reef Communities in Fagaʻalu Bay, American Samoa)

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):
The quality control occurred at two major stages - 1) data entry and 2) data management. Data entry quality control included both review and manual error correction steps. Data management quality control included several standard error queries followed by correction prior to ingestion into Oracle database.

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/25369

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:

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://accession.nodc.noaa.gov/0169727
https://accession.nodc.noaa.gov/0169727
https://accession.nodc.noaa.gov/0169727
https://accession.nodc.noaa.gov/0169727
https://accession.nodc.noaa.gov/0169727
https://accession.nodc.noaa.gov/0169727
https://accession.nodc.noaa.gov/0169727
https://accession.nodc.noaa.gov/0169727
https://accession.nodc.noaa.gov/0240418
https://accession.nodc.noaa.gov/0240418

7.3. Data access methods or services offered:

Data can be accessed online via the NOAA National Centers for Environmental Information (NCEI) Ocean Archive.

7.4. Approximate delay between data collection and dissemination:

Unknown

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):

Pacific Islands Fisheries Science Center - Honolulu, HI

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

Unknown

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

NOAA IRC and NOAA Fisheries ITS resources and assets.

9. Additional Line Office or Staff Office Questions

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