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 images collected at coral reef sites in Timor-Leste from 2012-2014

1.2. Summary description of the data:

Photographs of the seafloor were collected during benthic photo-quadrat surveys conducted by the NOAA Coral Reef Ecosystem Program (CREP) in hard bottom shallow water (< 15 m) habitats in Timor-Leste. Photographs were collected along transects at fixed climate survey sites in October 2012 and September-October 2014 (10 sites and 8 sites, respectively), and during reef fish surveys surveys at 150 sites that were selected using a stratified random sampling design in June 2013.

Climate sites were established by CREP to establish ecological baselines for climate change by measuring multiple features of the coral reef environment (in addition to the data described herein) over time. The reef fish surveys were conducted to generate baseline data on the nearshore coral reef fish assemblages and associated benthic communities around Timor-Leste's north coast and Atauro Island. The photographs can be accessed online via the NOAA National Centers for Environmental Information (NCEI) Ocean Archive.

The imagery from 2013 and 2014 has been quantitatively analyzed using image analysis software to derive an estimate of percent benthic cover. The benthic cover data, and the associated reef fish survey data and parameters measured to establish ecological baselines for climate change are documented separately.

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:

2013-06-04 to 2013-06-27, 2012-10-15 to 2012-10-25, 2014-09-16 to 2014-10-09

1.5. Actual or planned geographic coverage of the data:

W: 124, E: 127.5, N: -8.1, S: -9.5

Extent of photo-quadrat surveys conducted by NOAA CREP in Timor-Leste from 2012 to 2014.

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Image (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.)
Instrument: Digital camera
Platform: Not applicable
Physical Collection / Fishing Gear: Not applicable

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:
Annette M DesRochers

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:
annette.desrochers@noaa.gov

2.5. Phone number:
(808)725-5461

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:

Benthic photographs were collected for survey sites at pre-defined points along the transect. The photos are collected for the purpose of deriving benthic cover percentages using image analysis software, though, not all photo sets are analyzed. In the case where photographs were collected during both the initial deployment (2012) and final recovery missions (2014), typically only the most recent set of photographs are analyzed for benthic cover. This is true for the climate sites in Timor-Leste; the 2012 images were not analyzed.

Process Steps:

- Upon completion of each fish survey, one diver conducted a photoquadrat by photographing the benthos at 1-m intervals along the 30-m transect line between the centers of the two cylinders (30 photographs per site). A 1-m plastic polyvinyl chloride (PVC) pole was used to position a digital camera directly above the substrate to frame a photograph approximately 0.7 m2 in area. (Citation: Interdisciplinary Baseline Ecosystem Assessment Surveys to Inform Ecosystem-Based Management Planning in Timor-Leste: Final Report)
- At each Climate Monitoring site, digital photos of the benthos were collected at 1-m intervals along two transects implementing a high-resolution digital camera mounted on a pole. This process generated ~30 photographs per site. (Citation: Interdisciplinary Baseline Ecosystem Assessment Surveys to Inform Ecosystem-Based Management Planning in Timor-Leste: Final Report)
- Photos are color-corrected (if necessary) prior to analysis. The data management team also uses a optical validation script to rename photos and enforce several validation checks.

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):

Benthic images and the file structure are quality controlled by CREP personnel before

they are migrated and integrated into CREP's master optical directory on the PIFSC network. The photos are reviewed by the diver for accuracy and usability. The data management team also uses a optical validation script to re-name photos and enforce several validation checks.

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?

Yes

6.1.1. If metadata are non-existent or non-compliant, please explain:

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/46160

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:
http://accession.nodc.noaa.gov/0166378
http://accession.nodc.noaa.gov/0166378
http://accession.nodc.noaa.gov/0166378
http://accession.nodc.noaa.gov/0166378

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.