

*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 percent cover derived from analysis of benthic images collected at coral reef sites in Timor-Leste in 2013 and 2014

**1.2. Summary description of the data:**

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

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.

Percent benthic cover for each site is estimated from a photo-transect (30 photographs, taken at 1-m intervals, 10+ points analyzed per photograph using Coral Point Count with Extensions). NA values represent situations where images were either not gathered or not analyzed.

These benthic cover data for Timor-Leste provide an estimate of the benthic community composition at each survey site, and give context to the results from the other survey components. The benthic images, and the associated reef fish survey data and parameters measured to establish ecological baselines for climate change are documented separately. The data can be accessed online via the NOAA National Centers for Environmental Information (NCEI) Ocean Archive.

**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, 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 in 2013 and 2014.

**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:**

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:

The benthic photoquadrat survey methodology, employed by the NOAA Coral Reef Ecosystem Program (CREP) since 2013. Benthic imagery is collected at survey sites and is analyzed using Coral Point Count with Excel Extensions (CPCe) to derive benthic cover values.

Process Steps:

- The benthic photoquadrat imagery were analyzed using Coral Point Count with Excel extensions (CPCe; Kohler and Gill 2006) software. CPCe assigns 10 random points per photo and the benthic elements falling directly underneath each point is identified to two functional group levels: Tier 1 (e.g. hard coral, soft coral, macroalgae, turf algae, etc.) and Tier 2 (e.g. Hard coral by morphology = massive, branching, foliose, encrusting, etc.; Macroalgae = upright macroalgae, encrusting macroalgae, bluegreen macroalgae, and Halimeda, etc.). The detailed list of each functional group level or tier is included in the benthic image analysis classification scheme. (Citation: PIFSC. 2017. Interdisciplinary baseline ecosystem assessment surveys to inform ecosystem-based management planning in Timor-Leste: Final Report. NOAA Pacific Islands Fisheries Science Center, PIFSC Special Publication, SP-17-02, 234p.)
- Raw survey data includes unique image name and individual point observations identified at two functional group levels of benthic cover with the corresponding physical data which reflect the description of the site. The physical data for all records includes the following: region, island, site, date (day, month, year), latitude (dd), longitude (dd), reef zone, habitat type, depth category, minimum depth and maximum depth.

##### 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):**

Quality control is enforced by means of point-to-point, inter-observer calibration exercises that are conducted before each image analysis production series. Training modules and standard operating procedures have also been developed and documented to ensure improved performance and consistent imagery analysis results produced by multiple analysts.

**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/46161>

**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](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/0168620>  
<https://accession.nodc.noaa.gov/0168620>  
<https://accession.nodc.noaa.gov/0168620>  
<https://accession.nodc.noaa.gov/0168620>  
<https://accession.nodc.noaa.gov/0168620>  
<https://accession.nodc.noaa.gov/0168620>  
<https://accession.nodc.noaa.gov/0168620>

**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.*