

*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:**

Vogetrader Long-Term Monitoring 12 years After Impact: a collection of benthic data and imagery collected to evaluate reef recovery and the efficacy of restoration efforts at the M/V Vogetrader grounding site in O'ahu, Hawaii

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

On February 5, 2010, the cargo vessel M/V Vogetrader ran aground a shallow forereef in Oahu, Hawaii. In response to the loss of natural resources, three restoration techniques were implemented in 2013: coral outplanting, rubble removal, and passive restoration. In November 2022, monitoring surveys were conducted across three injury zones and nearby reference sites to assess recovery trajectories and compare the efficacy of the restoration efforts. Data collected before restoration during the initial damage assessment in 2010 is also included in the datasets described in this metadata record to improve usability and access for future datasets.

There are 6 datasets described in this metadata record:

Two datasets including 2010 and 2022 data for (1) coral size for identified taxa at the Vogetrader impact and reference sites across zone, habitat type, and quadrat replicate; and (2) coral abundance for identified taxa at the Vogetrader impact and reference sites across zone, habitat type, and quadrat replicate.

Four datasets of only 2022 data: (1) coral outplant assessment of species, size, and extent of partial mortality ; (2) juvenile coral density and settlement on rubble across varying sites of impact; (3) raw annotations of photoquadrat imagery for analysis of benthic/rubble cover across varying sites of impact; (4) photoquadrat imagery across varying sites of impact

Data was collected by NOAA's PIFSC Ecosystems Science Division. Funding was provided by PIRO and Hawaii's Division of Aquatic Resources. These data were gathered at the vessel grounding site located on the southern channel entrance to Barbers Point Harbor at a depth of 10 to 14m.

Before-After Control-Impact (BACI) and control-impact survey designs included 10 quadrat replicates for all habitat types of the impact and reference sites. 'Before' refers to 2010, and 'After' refers to 2022. Within each quadrat, divers recorded coral species,

maximum diameter, juvenile coral density, and the number of juvenile corals attached to unconsolidated reef framework. To evaluate benthic cover, a traditional National Coral Reef Monitoring Program (NCRMP) protocol was followed; digital photoquadrat images were taken along transect lines at each site. These images were annotated with the web tool CoralNet; ten images were randomly selected per site, overlaid with ten random points, and annotated as either rubble or non-rubble substrate. The assessment of coral outplants included recording species, maximum diameter, and the extent of partial mortality for all outplants relocated in the field.

The publication produced with the datasets described on this record: Morris JT, Huntington B, Couch C. et al 2024. Long-term outcomes of passive and active restoration approaches following a vessel grounding in Hawaii, USA Coral Reefs.

<https://doi.org/10.1007/s00338-024-02529-1>

**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:**

2022-11-07 to 2022-12-14

**1.5. Actual or planned geographic coverage of the data:**

W: -158.1277542, E: -158.1274074, N: 21.31614429, S: 21.31579432

**1.6. Type(s) of data:**

*(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)*

**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:**

Lori H Luers

**2.2. Title:**

Metadata Contact

**2.3. Affiliation or facility:**

**2.4. E-mail address:**

lori.luers@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:**

John Morris

### **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 Before-After Control-Impact (BACI) and control-impact survey designs included 10 quadrat replicates for all habitat types of the impact and reference sites. Within each quadrat, divers recorded coral species, maximum diameter, juvenile coral density, and the number of juvenile corals attached to unconsolidated reef framework. To evaluate benthic cover, digital photoquad images were taken along transect lines at each site. Ten images were randomly selected per site, overlaid with ten random points, and annotated as either rubble or non-rubble substrate. The assessment of coral outplants included recording species, maximum diameter, and the extent of partial mortality for all outplants relocated in the field.

**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):**

These data underwent quality control procedures by the PI of the project during the translation from field-sheets. No omission of data from the field-surveys was needed.

**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:

- 1.6. Type(s) of data
- 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/68077>

**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:**

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://accession.nodc.noaa.gov/0282702>

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**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.*