

APPENDIX F1.5. DATA STREAM PLAN: COASTAL IMPACT ASSISTANCE PROGRAM (CIAP) ROV SURVEY, STATE OF CALIFORNIA, FEBRUARY 2018

1. DATA AND INFORMATION TYPES

A. Provide a contextual description of the data stream.

In January 2014 the California Department of Fish and Wildlife (CDFW) initiated a three-year project to conduct remotely operated vehicle (ROV) surveys to monitor communities of fishes and invertebrates in deep-water habitats throughout the state. This work was funded by a grant from the Coastal Impact Assistance Program (CIAP) and CDFW Statewide Marine Protected Areas Management Project funds. CDFW staff managed data collection, imagery processing and reporting performed by Marine Applied Research & Exploration (MARE), a nonprofit organization that operates cost-effective and innovative deep-water robotic technology. The goal of the project was to complete quantitative baseline surveys of commercially and recreationally important species in deep rocky habitat with an emphasis on important managed species inside and outside of selected marine protected areas (MPAs). The data depict all ROV imagery information from the surveys, in addition to synthesized data estimating density and size of fish, invertebrates, and substrate observed. These later data are merged into continuous polygons.

The data are available in the CeNCOOS data portal: <https://l.axds.co/2CG0FxFK>

B. How many station locations are there for this data stream?

N/A

C. What are the specific parameters of the data.

The parameters of this data include: ROV imagery along transects from five research cruises (2014-2016). Additionally, the survey observations are summarized to include fish density, counts, effort area, temperature, depth, and substrate percent cover.

D. Provide information about the sampling platform or instrumentation.

The source data were created from ROV surveys along the California coast as conducted by the CDFW. Surveys primarily targeted sites with depths between 20 and 100 meters with the addition of four deep submarine canyon sites with depths up to 400 meters. CDFW & MARE completed five separate cruises at a total of 142 locations. Multiple 500 meter long video transects were performed at each site to calculate estimates of species densities along with associated habitat and environmental variables. MARE's ROV was configured with a forward-looking oblique view and vertical down-view video camera as well as a still photo and HD video camera. Stereographic video imagery provides estimation of the size of fish and invertebrates observed.

2. DATA PATHWAY

A. Is a data sharing agreement required?

Data are available publically.

B. In which format(s) was data received by CeNCOOS?

Data were received from the California Department of Fish and Wildlife (CDFW). GIS and observation data were received in the form of .mdb files. Media data were received in the form of digital video discs (DVD).

C. How can the information be accessed?

The data are available through the CeNCOOS data portal, where it can be viewed using interactive visualizations. Data files are also available for download from three unique access points: Web Mapping Service (WMS); Web Feature Service (WFS); and File Downloads (PNG, Shapefile, CSV).

D. What file formats will be used for sharing data, if different from original?

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E. Describe how the data is ingested(e.g. the flow of data from source to CeNCOOS data portals) and any transformations or modifications made to share data in the CeNCOOS data portal.

The data were delivered directly to CeNCOOS by the originator, converted to .csv files and subsequently imported to PostgreSQL, and then visualized with custom JSON REST service (JAVA). For interactive visualizations of fish and substrate data, flat tables were restructured into a relational database and a geometry was created from latitude and longitude values. Lookup tables were generated for user to explore the attributes of interest. Additionally, observations were mapped to labels. These observations were then summarized into a hexagonal heat map with coverage at 7 zoom levels. Observations were summarized into colored hexagons at each zoom level. The color of the hexagon varies relative to the total number of observations/percent coverage within that hexagon. Media data were transferred from DVD to a harddrive for long term storage, and were then uploaded to YouTube for public viewing. In PostgreSQL media data were linked spatially and temporally with YouTube and a custom JSON REST allows interactive viewing in a map application.

F. What metadata or contextual information is provided with the data?

Metadata are shared in the CeNCOOS portal with descriptive narratives describing the data and linking back to the originator's site, if available

<https://www.maregroup.org/cdfw-statewide-assessment.html>.

G. Are there ethical restrictions to data sharing?

No

a. If so, how will these be resolved?

N/A

H. Who holds intellectual property rights (IPR) to the data?

California Department of Fish and Wildlife (CDFW)

I. Describe any effect of IPR on data access.

None

3. DATA SOURCE AND QUALITY CONTROL

A. Indicate the data source type (i.e. Federal, Non-Federal, University, State Agency, Local Municipality, Military Establishment (branch), private industry, NGO, non-Profit, Citizen Science, Private individual)

State

a. If Federal data source, were changes applied to the data?

N/A

b. If Yes, describe any changes to the data that require documentation?

N/A

B. Indicate the data reporting type (e.g. real-time, historical).

Historical

C. If real-time, list the QARTOD procedures that are currently applied.

Not required

D. If real-time, list the QARTOD procedures that are planned for implementation.

N/A

E. What is the status of the reported data? (e.g. raw, some QC, incomplete, delayed mode processed but not QC'd)

Some QC as delivered from the originator(s).

F. Describe the data control procedures that were applied by the originator.

N/A

a. Provide a link to any documented procedures.

N/A

G. Describe the data control procedures that were applied by CeNCOOS.

N/A

a. Provide a link to any documented procedures.

N/A

H. List the procedures taken for data that could not be QC'd as directed.

N/A

4. STEWARDSHIP AND PRESERVATION POLICIES

A. Who is responsible for long-term data archiving?

Data was aggregated for visualization and exploration with other layers in the CeNCOOS data portal. If the data provider chooses to archive these data at a national archive in the future, they may do it directly, or using the CeNCOOS-facilitated pathway to NCEI.

B. Which long-term data storage facility will be used for preservation?

N/A

C. Describe any transformation necessary for data preservation.

N/A

D. List the metadata or other documentation that will be archived with the data.

N/A