Data Management Plan
Okeanos Explorer (EX1504L2): Campaign to Address Pacific monument Science, Technology, and Ocean Needs (CAPSTONE) Leg II

OER Data Management Objectives
Develop data management pipelines and procedures for sampling operations. Provide assistance in user interface for sampling database. Cross train two from ROV team on on-board data management procedures. Test the ability to record high definition video footage of a full dive onboard the ship. Develop and test protocols and procedures for handling the data from the Telestream video recording system.

1. General Description of Data to be Managed

1.1 Name and Purpose of the Data Collection Project

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1.2 Summary description of the data to be collected.

The ship will conduct 24 hour operations consisting of daytime ROV dives and evening/nighttime mapping operations including during transit. During this cruise we will conduct 8 hour ROV dives on most days with occasional 10 or 12 hour dives on particularly interesting or deep dive sites. ROV operations will focus in depths between 250 and 6,000 meters and will include high-resolution visual surveys and limited sample collection. Mapping operations will be conducted in 250m of water and deeper, and include transit and overnight multibeam, water column backscatter, and sub-bottom data collection. Opportunistic CTD rosette operations may be requested to collect more information about the environmental parameters at ROV dives sites, or opportunistically at selected sites where collecting the data is considered important to understanding the physical or chemical properties of the overlying water column. ROV and mapping operations will not be conducted in state waters. CTD rosette operations may be requested in state waters.

1.3 Keywords or phrases that could be used to enable users to find the data.

expedition, exploration, explorer, marine education, noaa, ocean, ocean discovery, ocean education, ocean exploration, ocean exploration and research, ocean literacy, ocean research, OER, science, scientific mission, scientific research, sea, stewardship, systematic exploration, technology, transformational research, undersea, underwater, Davisville, mapping survey, multibeam, multibeam backscatter, multibeam sonar, multi-beam sonar, noaa fleet, okeanos, okeanos explorer, R337, Rhode Island, scientific computing system, SCS, single beam sonar, singlebeam sonar, single-beam sonar, sub-bottom profile, water column backscatter, oceans, Pacific Islands Regional Initiative, Hohonu Moana, Hawaiian Archipelago, Johnston Atoll, CAPSTONE, Pacific Monuments, Pacific Sanctuaries, Marine National Monument, National Marine Sanctuary, Deep Sea Coral Research and Technology Program, DSCRTP, Papahanaumokuakea, PMNM, Pearl Harbor, Hermes Atoll, rift zone ridges, deepwater corals, deepwater sponges, sponges, Ni'ihau, Oahu, Hawaiian Islands Humpback Whale National Marine Sanctuary, HIHWNMS

1.4 If this mission is part of a series of missions, what is the series name?

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Okeanos ROV Cruises

1.5 Planned or actual temporal coverage of the data.

Dates: 7/31/2015 to   8/22/2015

1.6 Planned or actual geographic coverage of the data.

Latitude Boundaries: 20.7   to   28.6

Longitude Boundaries: -177.4   to   -157.2

1.7 What data types will you be creating or capturing and submitting for archive?

Cruise Plan, Cruise Summary, Data Management Plan, Highlight Images, Quick Look Report, CTD (raw), Dive Summaries, Expedition Cruise Report, GSF, Highlight Video, HL Image captions/credits, HL Video captions/credits, Mapping Summary, Multibeam (image), Multibeam (processed), Multibeam (product), Multibeam (raw), NetCDF, Raw Video (digital), Sample Logs, SCS Output (native), Sub-Bottom Profile data, Water Column Backscatter, XBT (raw)

1.8 What platforms will be employed during this mission?

Deep Discoverer ROV, NOAA Ship Okeanos Explorer, SEIRIOS Camera Sled

2. Point of Contact for this Data Producing Project

Overall POC: Christopher Kelley, Associate Professor, University of Hawai'I at Manoa, ckelley@hawaii.edu

Title: Associate Professor

Affiliation/Dept: University of Hawai'I at Manoa

E-Mail: ckelley@hawaii.edu

Phone: 808-956-7437

3. Point of Contact for Managing the Data

Data POC Name: Brendan Reser

Title: Oceanographer, Data Engineer

E-Mail: brendan.reser@noaa.gov

4. Resources

4.1 Have resources for management of these data been identified?   False

4.2 Approximate percentage of the budget devoted to data management. (specify % or "unknown")

unknown

5. Data Lineage and Quality

5.1 What is the processing workflow from collection to public release?

SCS data shall be delivered in its native format as well as an archive-ready, documented, and compressed NetCDF-4 format to NODC; multibeam data and metadata will be compressed and delivered in a bagit format to NGDC. Biological specimens collected will be preserved at the Smithsonian National Museum of Natural History and the

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Bernice Pauahi Bishop Museum in Honolulu. Geological specimens collected will be preserved at the Oregon State University Marine Geology Repository in Corvallis.

5.2 What quality control procedures will be employed?

Quality control procedures for the data from the Kongsberg EM302 is handled at UNH CCOM/JHC. Raw (level-0) bathymetry files are cleaned/edited into new data files (level-1) and converted to a variety of products (level-2). Data from sensors monitored through the SCS are archived in their native format and are not quality controlled. Data from CTD casts and XBT firings are archived in their native format and are not quality controlled. CTDs are processed into profiles for display only on the Okeanos Atlas.

6. Data Documentation

6.1 Does the metadata comply with the Data Documentation Directive?   True

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

6.2 Where will the metadata be hosted?

Organization: An ISO format collection-level metadata record will be generated during pre-cruise planning

URL: www.ncddc.noaa.gov/oer-waf/ISO/Resolved/2015/
                     discovery and access. The record will be harvested by data.gov.

Meta Std: ISO 19115-2 Geographic Information with Extensions for Imagery and Gridded Data will be the
                     metadata standard employed; a NetCDF-4 standard for oceanographic data will be employed
                     for the SCS data; the Library of Congress standard, MAchine Readable Catalog (MARC), will be
                     employed for NOAA Central Library records.

6.3 Process for producing and maintaining metadata:

Metadata will be generated via xml editors or metadata generation tools.

7. Data Access

7.1 Do the data comply with the Data Access Directive?   True

7.1.1 If the data are not to be made available to the public at all, or with limitations, provide a valid reason.

Not Applicable

7.1.2 If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure.

Account access to mission systems are maintained and controlled by the Program. Data access prior to public accessibility is documented through the use of Data Request forms and standard operating procedures.

7.2 Name and URL of organization or facility providing data access.

Org: National Centers for Environmental Information

URL: explore.noaa.gov/digitalatlas

7.3 Approximate delay between data collection and dissemination. By what authority?

Hold Time: no

Authority: not applicable

7.4 Prepare a Data Access Statement

No data access constraints, unless data are protected under the National Historic Preservation Act of 1966.

8. Data Preservation and Protection

8.1 Actual or planned long-term data archive location:

Data from this mission will be preserved and stewarded through the NOAA National Centers for Environmental Information. Refer to the Okeanos Explorer FY15 Data Management Plan at NOAA's EDMC DMP Repository (EX_FY15_DMP_Final.pdf) for detailed descriptions of the processes, procedures, and partners involved in this collaborative effort.

8.2 If no archive planned, why?

8.3 If any delay between data collection and submission to an archive facility, please explain.

30-60 days

8.4 How will data be protected from accidental or malicious modification or deletion?

Data management standard operating procedures minimizing accidental or malicious modification or deletion are in place aboard the Okeanos Explorer and will be enforced.

8.5 Prepare a Data Use Statement

Data use shall be credited to NOAA Office of Ocean Exploration and Research and the Deep Sea Corals Research and Technology Program.