1. DATA AND INFORMATION TYPES

A. Provide a contextual description of the data stream.

Marine mammal health serves as an indicator for the health of the marine ecosystem. The Marine Mammal Health Database is a collaboration among many groups, including the National Marine Fisheries Service (NMFS), Marine Mammal Health and Stranding Response Program (MMHSRP) and National Marine Mammal Stranding Network (NMMSN), the Marine Mammal Commission, the Integrated Ocean Observing System (IOOS), the National Wildlife Health Center, NGOs, academics, and State agencies.

The first objective of the Health Map was to conduct a small-scale pilot study using stranding data from California NMMSN responders collected from January 2005 to December 2010. Contributors reported at least two years of data within the timeframe.

The data depict all marine mammal health and stranding occurences from 1961 to 2013, that are filterable by health category, species, and data provider. These data are merged into continuous polygons for visual summary.

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

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: marine mammal and health stranding data collected from 1961 to 2013 by various data providers. Data can be filtered spatially, temporally, and by health category, category confidence, species, and provider organization.

D. Provide information about the sampling platform or instrumentation.

The source data were created from marine mammal stranding events conducted by various organizations along the California coast. Deceased animals were assigned to at least one health category based on the reported cause of death. Assignment of multiple categories was acceptable, but only if the cause was significant enough to contribute directly to stranding or death. Categories included: infectious disease – known pathogen; infectious disease – non-specific; biotoxin; trauma – other; trauma – human interaction; neoplasia; malnutrition; other; and unknown. When available, more specific information about disease processes also was reported. Additional data about each animal included genus and species, date of stranding location of stranding (county and coordinates), and confidence in health category assignment (diagnosed or suspected).

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 via one-time file transfer from the Marine Mammal Commission.

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?

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).

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, imported to PostgreSQL, and then visualized with custom JSON REST service (JAVA). For interactive visualizations of marine mammal 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 15 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 within that hexagon.

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.

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?

Various organizations, including National Marine Fisheries Service (NMFS), Marine Mammal Health and Stranding Response Program (MMHSRP) and National Marine

Mammal Stranding Network (NMMSN), the Marine Mammal Commission, the Integrated Ocean Observing System (IOOS), the National Wildlife Health Center, NGOs, academics, and State agencies

- 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) Federal, State, University, Private, NGO
 - 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. $N\!/\!A$