
Research Advance

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Call For Data: Bering Sea Ecosystem Metadatabase

The U.S. National Oceanic and Atmospheric Administration (NOAA) is beginning a project to assemble a biophysical metadatabase on the Bering Sea ecosystem. The goal of this project is to facilitate research, education, and general knowledge of the Bering Sea by locating and assembling an inventory of the biological and physical data that have been collected on the Bering Sea ecosystem.

The project is funded by the NOAA Environmental Services Data Information Management (ESDIM) Program. The Bering Sea Ecosystem Biophysical Metadatabase Project has the full endorsement of the North Pacific Marine Science Organization (PICES) and is managed by the Fisheries-Oceanography Coordinated Investigations Program through the Alaska Fisheries Science Center and Pacific Marine Environmental Laboratory.

The objective of the project will be realized through locating and assembling an inventory of the extensive biological and physical data collected on the eastern and western Bering Sea ecosystem, developing these into an indexed, annotated catalog (metadatabase), and making the metadatabase available through various mechanisms. Existing information as well as recently gathered data will be examined. The metadatabase will be made available to users in online formats. Researchers will benefit from this project's activity by having the ability to access the metadatabase from their desktop browser. The online form of the metadatabase will provide instantaneous access to the collected information and will be implemented from the World Wide Web (WWW) in a familiar homepage format. This approach will provide users a real-time direct link to the metadatabase for querying and viewing data online.

You can help by identifying sources of physical and biological data on both the eastern and western parts of the Bering Sea ecosystem you are familiar with. We seek data products related to the Bering Sea ecosystem that span all biological and physical scientific disciplines, including historical as well as contemporaneous information and information products on all Bering Sea ecosystem components, ranging from open ocean to intertidal areas. Types of information that are

of interest include but are not limited to CTD; XBT or other water property and water chemistry information sources; ocean currents and velocities; bathymetry; all satellite images, including maps of atmospheric circulation, ocean color, ocean SST, or ocean chlorophyll concentrations; abundance and distribution of all biological organisms from all trophic levels of the ecosystem, from microbacteria and small benthic organisms to whales; sea bird data; sea ice physics; geological information; bottom composition; sources of anthropogenic contamination; information on atmospheric circulation; properties of the atmosphere and ocean-atmosphere interface; and harvests of exploited marine populations.

Please bear in mind that we are not interested in the actual data. Rather, we plan to report the existence of the data with a metadata description. Metadata succinctly describes the content, quality, condition, spatial, and temporal characteristics of data. A database of metadata is not a database of scientific data observations; rather, it serves as a tool that references the existence of data and information products. Reporting your information as metadata will assist other scientists in locating and understanding your data. Those seeking more information or having knowledge of data that would enhance the metadatabase are urged to register through the WWW at URL <http://www.pmel.noaa.gov/bering/mdb/>, or you may contact me at the address listed below, or phone (206) 526-4147 (voice), or (206) 526-6723 (fax), or (206) 525-6190 (data), or email bmegrey@afsc.noaa.gov.

When completed, the metadatabase will address a serious deficiency identified in 1996 by the National Research Council. In their report on the Bering Sea ecosystem, the council flagged the lack of such a database as the one major impediment to studying the Bering Sea. Many different types of physical and biological data already have been collected; for example, single-point and gridded time series, repetitive observations from earth-orbiting satellites, ocean surveys of physical and biological oceanographic significance, specimen collections, and historical records of animal population changes. Data are available from at least the last century, and in the last 2 decades the Bering Sea has been the subject of close scrutiny by such major research programs as Outer Continental Shelf Environmental Assessment Program (OCSEAP) and Processes and Resources of the Bering Sea Shelf

(PROBES). What is needed, and what NOAA Environmental Services Data Information Management has funded through this project, is a single, stand-alone resource that will reference as much historical data as can be located.

Benefits will be immediate and ongoing. Recently, the Bering Sea's economic and biological significance has provided impetus for the proliferation of a number of active, regional (PICES/GLOBEC CCCC, Bering Sea Impacts Study), national (Bering Sea FOCI, Southeast Bering Sea Carrying Capacity, Bering Sea Ecosystem Study), and international (PICES/GLOBEC, Japanese and Russian programs) research efforts aimed at understanding dynamics of the Bering Sea ecosystem. All of these current programs have field- and data-collection components associated with them and are in a position to contribute to, and benefit from, the metadatabase.

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