Biological & Chemical Oceanography Data Management Office

Office Description

The **B**iological and **C**hemical **O**ceanography **D**ata **M**anagement **O**ffice (**BCO-DMO**) was created to serve PIs funded by the NSF Biological and Chemical Oceanography Sections as a location where marine biogeochemical and ecological data and information developed in the course of scientific research can easily be disseminated, protected, and stored for short and intermediate time-frames. **Our main objective is to support the scientific community through improved accessibility to ocean science data.**

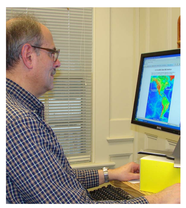
Data Stewardship

The BCO-DMO manages the US JGOFS and US GLOBEC data collections, data and supporting information (metadata) from new programs, including initial programs associated with the OCB DMO (CARIACO, EDDIES, MedFlux, SOFeX, VERTIGO), and new data sets from individual scientific investigators and collaborative groups of investigators. The office will continue to make these available via any standard web browser. The JGOFS/ GLOBEC distributed, object-oriented, relational data management system software, enhanced with OGC compliant Web Services, will be used to serve data and information to research investigators as well as the larger community.

Collaboration

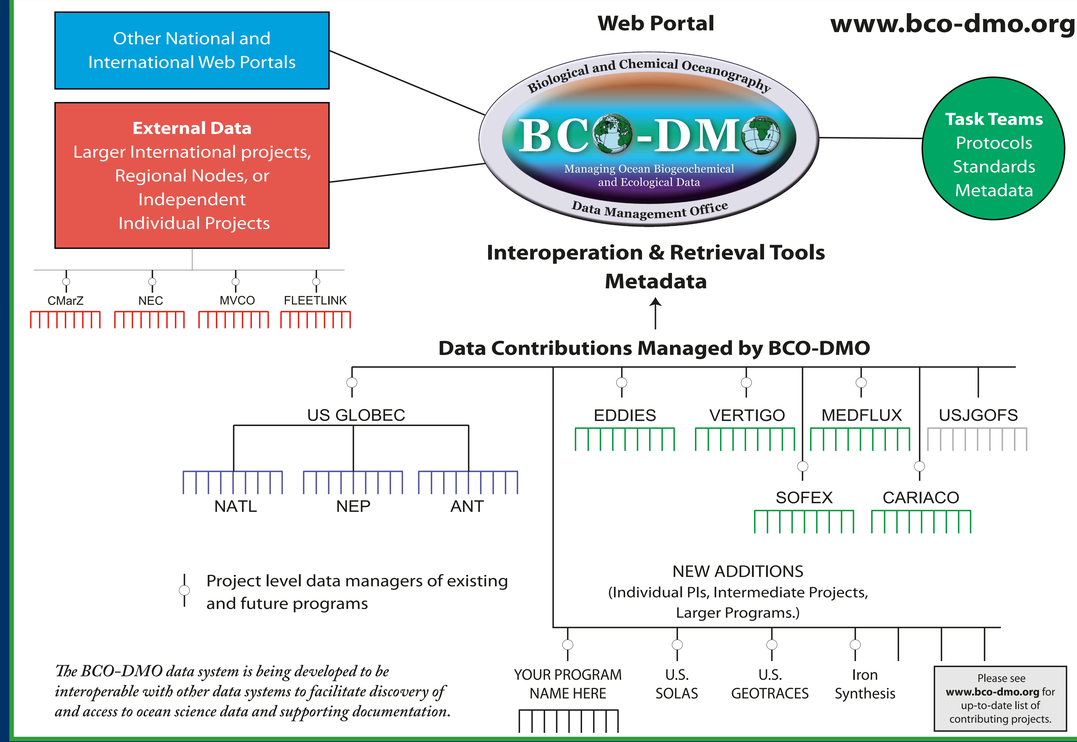
- Work with principal investigators on data quality control;
- Maintain an inventory of available data and program thesaurus based on a controlled vocabulary;
- Generate metadata records required by Federal agencies;
- Ensure submission of data to national data centers;
- Facilitate data synthesis by providing support and encourage data synthesis by providing new, online, web-based display tools;
- Facilitate interoperability among different data portals;
- Facilitate regional, national, and international data and information exchange.

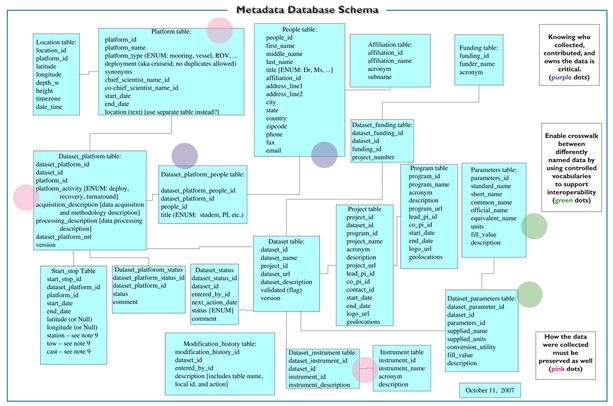
Metadata — Cruise Report • Event log • Methodology Documentation



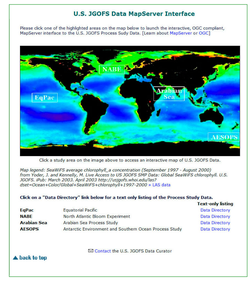
For a multi-disciplinary sampling program conducted aboard a research vessel, a sampling event log and cruise report constitute an important part of the final results and greatly enhance the value of the published data. Documented sampling and analytical protocols, instrument descriptions, quality control and post-processing procedures complete the metadata records. **Supporting documentation is essential for efficient and accurate reuse of data.**

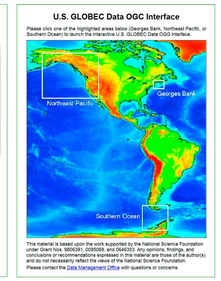
Interoperability

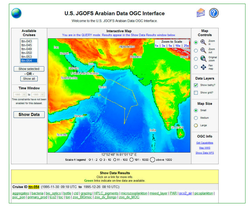




Visualization







- MapServer interface with OGC WMS and WFS access.
- SQL/OBIS (DiGIR) interface to related biological, chemical, and physical oceanographic data will be supported.
- Google Earth KML output format will also be supported.
- Data can be downloaded in several user-selectable formats: comma or tab-separated ASCII, Matlab binary format or NetCDF files. Other formats (e.g. Ocean Data View) will be added in the future.

As illustrated by the two separate map images here, the U.S. JGOFS and U.S. GLOBEC data sets are currently accessed through separate but similar MapServer interfaces. Our goal is a single, integrated map display, supporting all available data sets, retrievable by such attributes as geographic location, date and time, funding sources, project/program names, and names of scientific investigators.