

# The Biological and Chemical Oceanography Data Management Office (BCO-DMO)

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BCO-DMO ~ WHOI ~ USA

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Woods Hole, MA USA

## Discussion Points

- What and who is the BCO-DMO?
- How does BCO-DMO relate to OCB?
- Guiding principles of data management ...
- Important concepts in data management ...
- What does all of this mean to you?

# The Biological and Chemical Oceanography Data Management Office (BCO-DMO)

The BCO-DMO was initially created in late 2006 to serve PIs funded by the US NSF Biological and Chemical Oceanography Sections. It has since been expanded to serve the data management needs of the Ocean Carbon and Biogeochemistry group of researchers in the US. It is a location from which marine biogeochemical and ecological data and information developed in the course of scientific research can easily be disseminated, protected, and stored on short and intermediate time-frames.

**The BCO-DMO is located at the Woods Hole Oceanographic Institution.**

**The Web-site is:** <http://www.bco-dmo.org>

**BCO-DMO managers:**

Robert Groman (rgroman@whoi.edu)  
Cyndy Chandler (cchandler@whoi.edu)

**BCO-DMO lead PIs:**

Peter Wiebe (pwiebe@whoi.edu)  
David Glover (dglover@whoi.edu)



## Data specialists

- Dicky Allison – Biology (GLOBEC)
- Nancy Copley – Biology (EDDIES)
- Terry McKee – Physical Oceanography (CARIACO)
- Dave DuBois – Geology (SOFeX)
  
- Steve Gegg – Iron Synthesis program
  - new team member in May 2008

## How does BCO-DMO relate to OCB?

- BCO-DMO staff are available to provide data management support for investigators funded by the Biological or Chemical Oceanography sections of NSF Ocean Sciences
- BCO-DMO currently managing data for these projects:
  - CARIACO Time-series
  - EDDIES
  - MedFlux
  - VERTIGO
  - CMarZ
  - Iron Synthesis (EIFEX, IronEx, SEEDS, SERIES, SOIREE, SOFeX)
  - GEOTRACES
  - US SOLAS
  - US GLOBEC
  - US JGOFS

# Guiding principles of data management

## ***“data stewardship”***

- quality assurance of data
- treat all information as data
- data that lack sufficient metadata have limited value beyond the research program for which they were collected
- metadata should include sufficient information to support discovery, value assessment and accurate re-use of data

*The data collection generated by a research project  
is a valuable component of its legacy.*

# What does all of this mean to you?

- BCO-DMO staff have been funded to work with investigators to manage data generated by research projects of interest to the OCB community
  - Capture and record supporting documentation (metadata)
    - ❖ Best Practice Guidelines Manual
  - Make data and metadata available
    - ❖ Restricted or public access as appropriate
  - Ensure final archive of data in appropriate center (NOEC, CDIAC)



# What does all of this mean to you?

- Contact us for advice and/or assistance
  - prior to planning workshops
  - during proposal writing (letter of support)
  - after receipt of award letter to update us on science plan
  - prior to cruise ...
    - ❖ cruise metadata forms
    - ❖ discuss data management strategy to support research
  - post-cruise ... data publishing ...
    - ❖ data inventory
    - ❖ cruise documentation
    - ❖ data contributions ... all published in BCO-DMO database





## Database

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## Biological and Chemical Oceanography Database

The database currently includes data contributed from these research initiatives:

- Census of Marine Zooplankton (CMarZ)
  - Census of Marine Zooplankton (CMarZ)
- GEOTRACES (GEOTRACES)
- Iron Synthesis (FeSYN)
  - European Iron Enrichment Experiment (EisenEX)
  - European Iron Fertilization Experiment (EIFEX)
  - Iron Experiment I (IronEx I)
  - Iron Experiment II (IronEx II)
  - Southern Ocean Iron Experiment (SOFeX)
  - Southern Ocean Iron Release Experiment (SOIREE)
  - Sub-Arctic Ecosystem Response to Iron Enrichment Study (SERIES )
  - Subarctic Pacific Iron Experiment for Ecosystem Dynamics Study II (SEEDS 2004)
  - Subarctic-Pacific Iron Experiment for Ecosystem Dynamics Study I (SEEDS 2001)
  - Surface-Ocean Lower-Atmosphere Studies Air-Sea Gas Exchange (Experiment) (SAGE)
- North American Carbon Program (NACP)
- NorthEast Consortium (NEC)
  - NorthEast Consortium (NEC)
- Ocean Carbon & Biogeochemistry (OCB)
  - Carbon Retention In A Colored Ocean Project (CARIACO)
  - Eddies Dynamics, Mixing, Export, and Species composition (EDDIES)
  - MedFlux collaborative research project (MedFlux)
  - VERTical Transport In the Global Ocean (VERTIGO)
- U.S. GLOBAL ocean ECosystems dynamics (U.S. GLOBEC)
  - U.S. GLOBEC Georges Bank (GB)
  - U.S. GLOBEC Northeast Pacific (NEP)
  - U.S. GLOBEC Southern Ocean (SO GLOBEC)
- U.S. Joint Global Ocean Flux Study (U.S. JGOFS)
  - U.S. JGOFS Antarctic Environment and Southern Ocean Process Study (AESOPS)
  - U.S. JGOFS Arabian Sea (Arabian Sea)
  - U.S. JGOFS Equatorial Pacific (EqPac)
  - U.S. JGOFS North Atlantic Bloom Experiment (NABE)
- United States Surface Ocean Lower Atmosphere Study (U.S. SOLAS)
  - U.S. SOLAS Air-Sea Gas Exchange (SAGE) Experiment (SAGE)



**CMarZ**  
**GEOTRACES**  
**Iron Synthesis**  
**NACP**  
**OCB**  
**US GLOBEC**  
**US JGOFS**  
**US SOLAS**

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## BCO-DMO Contact Information

Please contact one of us if you have any questions or comments about the BCO-DMO initiative or would like to discuss publication of data or results from your project.

### Lead Investigators

David Glover (Marine Chemistry and Geochemistry Department, WHOI)

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### Data Managers

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### Web Site Manager

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### Location

The BCO-DMO is located at the [Woods Hole Oceanographic Institution](#), in Woods Hole, MA, USA.

## Upcoming events

[OCB Summer Workshop 2008](#)

(9 days)

[AGU Fall Meeting](#)

(156 days)



[more](#)

BCO-DMO Web Site  
<http://bco-dmo.org>