



National Oceanographic Data Center Overview

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NODC: Mission and Goals

- ✓ **Mission:** *To provide scientific stewardship of marine data and information.*

- ✓ **Goals:**
 - *Manage a comprehensive ocean data archive recognized by data providers and users.*
 - *Provide access to NODC archival data for a multitude of purposes.*
 - *Develop NODC products recognized as authoritative data records.*
 - *NOAA staff using the NOAA Central and Regional Libraries as sources for information and research support.*



NODC: Tasks and Services

- ✓ **Emphasis on FGDC-identified data life cycle elements**
 - **Inventory and evaluate**
 - Awareness of data collection efforts in the ocean observation community
 - Identify and negotiate with data providers to acquire data for long term retention
 - **Archive**
 - Manage, maintain and improve the long term repository of ocean observation data, metadata and data products
 - **Access**
 - Facilitate discovery and access to archival data and products through a variety of standards-based technologies (FTP/HTTP; DAP; OGC protocols; LAS, KML, GIS) and well-designed data discovery techniques
 - **Use and evaluate**
 - Create products and perform additional data stewardship analyses on archival holdings

NODC: Data types

✓ *In situ* observations

- *Physical (e.g., temperature, salinity, currents, wave heights, sea level, marine meteorology)*
- *Chemical (e.g., dissolved oxygen and nutrients, pollutant concentrations)*
- *Biological (e.g., taxonomic IDs and counts, biometrics, distribution surveys)*

✓ *In situ* products

- World Ocean Database and World Ocean Atlas
- Shipboard Sensor Database
- Global Temperature Salinity Profile Program
- Global Argo Data Repository
- Joint Archive for Sea Level
- Ecowatch and Harmful Algal Bloom Observing System
- NDBC Ocean-Met buoys



NODC: Data types

✓ **Satellite observations**

- *Physical (e.g., sea surface temperature, altimeter, marine winds)*
- *Biological (e.g., ocean color)*

✓ **Satellite products**

- GHR SST
- Pathfinder
 - CORTAD (Coral Reef Temperature Anomaly Database)
 - SST climatologies
- Jason 1 and Jason 2
- GEOSAT
- SeaWIFS
- MODIS
- MERIS



NODC: Library resources

✓ ***Catalog of library holdings***

- *All NOAA scientific research domains*
- *Print and e-books*
- *Inter-library loan*

✓ ***Print and E-journals***

✓ ***Wind and Sea Internet Guide***

- *Index of links to 1000+ subject-specific websites*

✓ ***Indexing and abstracting databases***

✓ ***Photo and video library***

✓ ***Rare books collection***

✓ ***Bibliographies and subject guides***

✓ ***Brown bag seminars***



NODC: Data providers and Data consumers

✓ Data providers include

- US and Foreign government agencies
 - WDC and other intergovernmental efforts
- State, local, regional government agencies
- University and research organizations
- Industry
- NGOs

✓ Data consumers include

- US and Foreign government agencies
 - WDC and other intergovernmental efforts
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NODC: Services and gaps

- ✓ **Using multiple standard data access protocols**
 - http and ftp (all archived data and digital data products)
 - DAP, OGC services (currently not SOS or WFS) (most archived data and digital data products)
 - LAS, GIS, KML (growing number of archived data and digital data products)
- ✓ **Using controlled vocabularies in our metadata**
 - People, Institutions, Projects, Data types, Instrument types, Observation types
 - Seenames – initially based on IHB Limits of Oceans and Seas 1953
 - Platforms – coordinated with International Council for Exploration of the Sea (ICES)
- ✓ **Increasing awareness and use of other standards**
 - Transitioning from internal to FGDC to ISO19115 family
 - Developing and encouraging use of netCDF and CF metadata



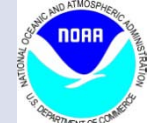
NODC: Relevant success stories

- ✓ **SAMOS (Shipboard Automated Meteorological and Oceanographic System)**
 - Partnership with Florida State University to acquire and archive underway surface meteorological and thermosalinograph data processed by SAMOS
 - Automated process for moving data from FSU to NODC
- ✓ **OER (Office of Ocean Exploration and Research)**
 - End-to-end data management tasks identified, documented and performed to support OER data collection activities
 - Proposals and cruise planning to archival retention and long term access
 - Many data types included in the end-to-end processes
- ✓ **CoRIS (CRCP Coral Reef Information System)**
 - Metadata clearinghouse and data / information discovery capabilities
 - Product deliverables tracking and follow up with Coral Reef Conservation Program (CRCP) investigators



NODC: Relevant success stories

- ✓ **World Ocean Database, GTSP and Global Argo Data Repository**
 - International data management efforts to steward temperature, salinity and other data from multiple data providers
 - Develop data products that support global and regional scientific analyses
- ✓ **Group for High Resolution Sea Surface Temperature**
 - International effort to define common infrastructure and standards for high resolution sea surface temperature data products
 - Develop data products that support global and regional scientific analyses
 - Develop pioneering automated archiving processes that can be repurposed for other types of data
- ✓ **Deepwater Horizon oil spill event response**
 - Acquired, processed and archived CTD data and other information
 - Developed web interface for public access to data and information resources



Thanks!

Any questions?

Send data to NODC.DataOfficer@noaa.gov

Get data discovery assistance at NODC.Services@noaa.gov

Discover data at www.nodc.noaa.gov

Discover library resources at www.lib.noaa.gov

Discover coastal resources at www.ncddc.noaa.gov

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