

# NODC Ocean Acidification Data Submission 101

Ocean Acidification Data Stewardship  
(OADS) Team

[www.nodc.noaa.gov/oceanacidification](http://www.nodc.noaa.gov/oceanacidification)

Nodc.ocean.acidification@noaa.gov

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# OADS Introduction

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## □ **What is OADS**

- Short for Ocean Acidification Data Stewardship (OADS) Project
- Funded by NOAA's Ocean Acidification Program.

## □ **Project Goal:**

- Overarching goal is to serve the OA community by providing dedicated online data discovery, access to OAP funded data and other ocean carbon data sets.

## □ **Team Members:**

- Krisa Arzayus, Ph.D.
  - Chief, Marine Data Stewardship Division
- Hernan Garcia, Ph.D.
  - Team Lead of OADS
- Sheri Phillips
  - Responsible for biological data
- Liqing Jiang, Ph.D.
  - Responsible for chemical data

# Outline

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- ▣ Where to submit your data
  
- ▣ Sending your data to NODC
  - Data files preparation
  - Metadata files preparation
  - File transmission
  - What happens after your data is submitted
  
- ▣ Other Information:
  - Data citation
  - Restricted access to data

# Where to submit your data

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- National Oceanographic Data Center (NODC).
  - ▣ Ultimately, all OAP funded data need to be archived at NODC.
  
- Other data acquisition centers (DACs)
  - ▣ You have the option of sending your data to DACs other than NODC.
  - ▣ You are required to send an email to [nodc.ocean.acidification@noaa.gov](mailto:nodc.ocean.acidification@noaa.gov), as soon as the data submission is complete. In the email, please describe:
    - i. Which DAC you submitted your data to;
    - ii. Title of your data set, and any other data set identifiers if available;
    - iii. Date and time of your data submission;
    - iv. A point of contact from your research group for future communication concerning this data set.

# Data files preparation (observational OA data sets)

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- **All formats are ok:**
  - Excel, etc
  
- **Preferred file formats:**
  - ASCII (csv, txt, etc)
  - Netcdf
    - [NODC netcdf templates](#)
  
- **Recommended column headers:**
  - Surface Underway data
    - [Column headers,](#)
    - [Example file \(csv\)](#)
  - Profile data (e.g., CTD, discrete bottle data)
    - [Column headers,](#)
    - [Example file \(csv\)](#)
  - Mooring data (e.g., buoys)
    - [Column headers,](#)
    - [Example file \(csv\)](#)

# Implementing ISO metadata standard

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- NODC follow NOAA's directives for management of environmental data and information ([NOAA's Administrative Order 212-15](#))
- At NODC we are implementing metadata standards based on ISO, the International Organization for Standardization
- Applying standards facilitates inter-operable machine-to-machine discovery of data for the long-term.

# Metadata files preparation options (observational OA data sets)

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## □ XML version :

- To fill out the [xml template \(ISO 19115-2\)](#) directly.

## □ To use an input form to fill out the XML template

- Download [the input form file \(\\*.sps\)](#), in addition to the xml file above, and save it in the same folder as the \*.xml file.
- Download [the community version of Authentic](#), and install it on your PC.
  - For Mac OS or Linux users, please check out [this link](#).
- Open Authentic, File-> Open -> choose \*.xml -> click “OK” for the license warning -> click “OK” for the next warning as well -> browse to the \*.sps file and click “OK”
- Start inputting your metadata and remember to save your progress along the way.
- When you are done, send the finished \*.xml file to [nodc.ocean.acidification@noaa.gov](mailto:nodc.ocean.acidification@noaa.gov)

## □ Text version (recommended):

- To fill out an [text file](#), and we will do the rest of the work for you.
  - [Example](#) of a completed metadata file.
  - [Definitions about the metadata terms](#)

# Metadata files preparation (experimental biological OA data sets)

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## □ **Currently in development:**

### □ Metadata templates

- ISO 19115 biological template record(s) based on the current OA template with additional documentation fields for taxonomy and methodologies (XML format).
- "Fillable" text version(s) of the OA biological template

## □ **Planned:**

- Biological data input form modified from original OA input form.

## □ **PIs may currently submit data following current OA data submission procedures**

- During the interim period for developing biology-specific templates and tools, data may be submitted to the NODC with a study description and associated data file header and measured parameter/variable information. Please include accompanying metadata as reports, text, and/or other standard metadata formats (if available) such as FGDC. Providing detailed documentation in addition to the data is strongly suggested.
- Accompanying documentation should describe experimental geographical information/details for field-collected specimens and specific taxonomy as applicable.
- Documentation provided by PIs will be converted to ISO format; the completed standard format metadata will be included as part of the final data archival package at the NODC.

# File transmission to NODC

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- We recommend you to compress all files before your file transmission.
- You could deliver the compressed files to NODC in the following ways:
  - Email files in an attachment to: [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov), and cc [NODC.Ocean.Acidification@noaa.gov](mailto:NODC.Ocean.Acidification@noaa.gov)
  - FTP (details in the following two slides)
  - Regular mail (e.g., DVD)
    - Mailing Address:  
Data Officer  
SSMC3 E/OC1 4th Floor  
1315 East-West Highway  
Silver Spring, MD 20910
- If FTP or Regular mail is used, you are still required to send an email to [NODC.DataOfficer@noaa.gov](mailto:NODC.DataOfficer@noaa.gov), and cc [NODC.Ocean.Acidification@noaa.gov](mailto:NODC.Ocean.Acidification@noaa.gov) to inform us after the file transmission is completed.

# FTP files to NODC (Windows)

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Assuming your file is at **G:/PATH/OA/test.txt** of your local computer, and you want to copy them to NODC's FTP server at **pub/incoming/oads**.

## □ Instructions:

- 1) Open Windows Command Prompt window (run "CMD", or Start->Programs->Accessories->Command Prompt)
- 2) Change the disk name to G: by typing "G:"
- 3) Use the command "cd" to navigate to the directory of "G:\PATH\OA\"
- 4) Enter "ftp ftp.nodc.noaa.gov"
- 5) When prompted for name, enter "anonymous".
- 6) When prompted for password, enter your e-mail address.
- 7) Change directory to "pub/incoming/oads" by entering: "cd pub/incoming/oads/".
- 8) Change transfer type to ASCII by entering "ascii" if the data files are text. If the file is a special PC format (image, word processor, spread sheet, presentation graphics) do not change the type to ascii, but make sure the transfer type is binary by entering "bin". **Please use "bin" for compressed files.**
- 9) Use "put filename", where "filename" is the name of your file, or for multiple files use "mput \*.\*" or "mput \*" to transmit the data files. When transferring multiple files you can turn off the prompt for each filename by typing "prompt" before you type the "mput" command
- 10) After completion of file transmission, enter "ls" to obtain a list of files that were sent, both by you and other recent data submitters
- 11) Enter "bye" to log off.

# FTP files to NODC (Macintosh or Linux)

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Assuming your file is at `/PATH/OA/test.txt` of your local computer, and you want to copy them to NODC's FTP server at `pub/incoming/oads`.

## □ Instructions:

- 1) Open a terminal and navigate to the folder (`/PATH/OA/`) on your computer by using the command `"cd"`.
- 2) Enter `"ftp ftp.nodc.noaa.gov"`.
- 3) When prompted for name, enter `"anonymous"`.
- 4) When prompted for password, enter your e-mail address.
- 5) Change directory to `"pub/incoming/oads"` by entering: `"cd pub/incoming/oads/"`.
- 6) Change transfer type to ASCII by entering `"ascii"` if the data files are text. If the file is a special PC format (image, word processor, spread sheet, presentation graphics) do not change the type to `ascii`, but make sure the transfer type is binary by entering `"bin"`. **Please use "bin" for compressed files.**
- 7) Use `"put filename"`, where `"filename"` is the name of your file, or for multiple files use `"mput *.*"` or `"mput *"` to transmit the data files. When transferring multiple files you can turn off the prompt for each filename by typing `"prompt"` before you type the `"mput"` command
- 8) After completion of file transmission, enter `"ls"` to obtain a list of files that were sent, both by you and other recent data submitters
- 9) Enter `"bye"` to log off.

# After your data set comes to NODC

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## □ Always happen

### □ **Archive the data in the Ocean Archive System**

- An email to data provider after an Accession number is created
- A second email to data provider after the data are published online

### □ **Create a rich metadata using ISO XML template**

## □ Possibly happen

### □ **Update your data and create a new version (under your permission)**

### □ **Convert your data files into Netcdf format**

### □ **Your data might be used in data products, such as the World Ocean Database**

# Data Citation (DOIs)

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- **Digital Object Identifiers (DOIs):**
  - NOAA/TPIO has procured services to issue digital object identifiers (DOIs).
  - Data Centers are working with the NOAA Environmental Data Management Committee and the NOAA Data Architect on
    - Procedural Directive for DOIs
    - A common look-and-feel landing page for datasets with DOIs
  - NOAA National Data Centers will issue the DOIs for data sets they steward.
  - A limited number of data sets will be issued as a pilot, as NOAA develops standard operating procedures for operational implementation.
  
- **Requirements:**
  - Any dataset must have a robust ISO metadata record
  - Each dataset must have a browse graphic associated with it
  - Data must be freely and openly accessible

*Are OAP PIs interested in participating in the DOI pilot?*

# Restricted access to data

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- The White House has issued several mandates for open access to government funded data.
- NODC supports freely and openly accessible data.
- Data that have access limitations are considered exceptions to this policy.
- Restricted access metadata must include the finite duration during which access is limited/embargoed.
- Complete metadata for restricted access data will be available, i.e. data will be discoverable but not accessible.

*Are there OAP PIs that anticipate needing limited or restricted access to data?*

# Acknowledgement

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- Funding support from the NOAA's Ocean Acidification Program.
- ISO help from Sarah O'connor and Jacqueline Mize.
- Biological OA data template from Chris Chambers.

# Useful Links:

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- Link to the latest version of the ppt file: Useful Links:  
[http://www.nodc.noaa.gov/oceanacidification/support/NODC\\_OADS\\_data\\_submission\\_09v2.pdf](http://www.nodc.noaa.gov/oceanacidification/support/NODC_OADS_data_submission_09v2.pdf)
- OADS data submission guidelines:  
[http://www.nodc.noaa.gov/oceanacidification/stewardship/OADS\\_Data%20Submission\\_Guidelines.html](http://www.nodc.noaa.gov/oceanacidification/stewardship/OADS_Data%20Submission_Guidelines.html)
- [ISO training courses](#)

# For help

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- OADS email address:
  - [Nodc.ocean.acidification@noaa.gov](mailto:Nodc.ocean.acidification@noaa.gov)
  
- OADS Team contact info:
  - Krisa Arzayus:
    - Email: [krisa.arzayus@noaa.gov](mailto:krisa.arzayus@noaa.gov)
    - Phone: 301-713-3280 x119
  - Hernan Garcia:
    - Email: [Hernan.Garcia@noaa.gov](mailto:Hernan.Garcia@noaa.gov)
    - Phone: 301-713-3290 x184
  - Sheri Phillips:
    - Email: [sheri.phillips@noaa.gov](mailto:sheri.phillips@noaa.gov)
    - Phone: 301-713-3280 x127
  - Liqing Jiang:
    - Email: [Liqing.Jiang@noaa.gov](mailto:Liqing.Jiang@noaa.gov)
    - Phone: 301-713-3272 x106

# OADS submission workshop dates

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- July 12, 2013
  - August 2, 2013
  - September 6, 2013
  - October 4, 2013
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- We can help with specific questions that you may have on 1-1 teleconference/webex.