CHOne

CANADIAN HEALTHY OCEANS NETWORK

Metadata

Data Management Workshop

May 1st, 2017

Gatineau, Quebec

What is Metadata?

WHO created the data?

WHAT is the content of the data?

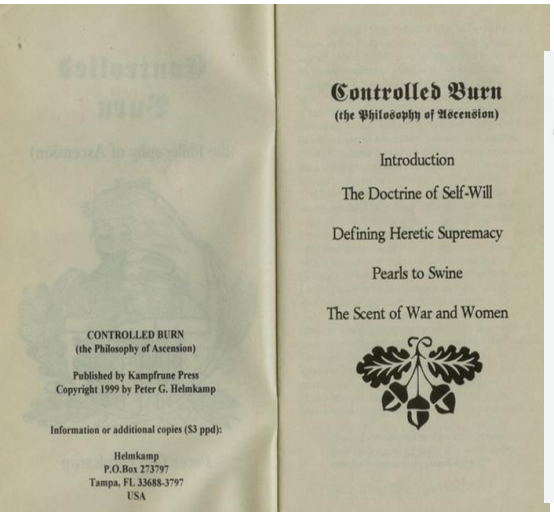
WHEN were the data created?

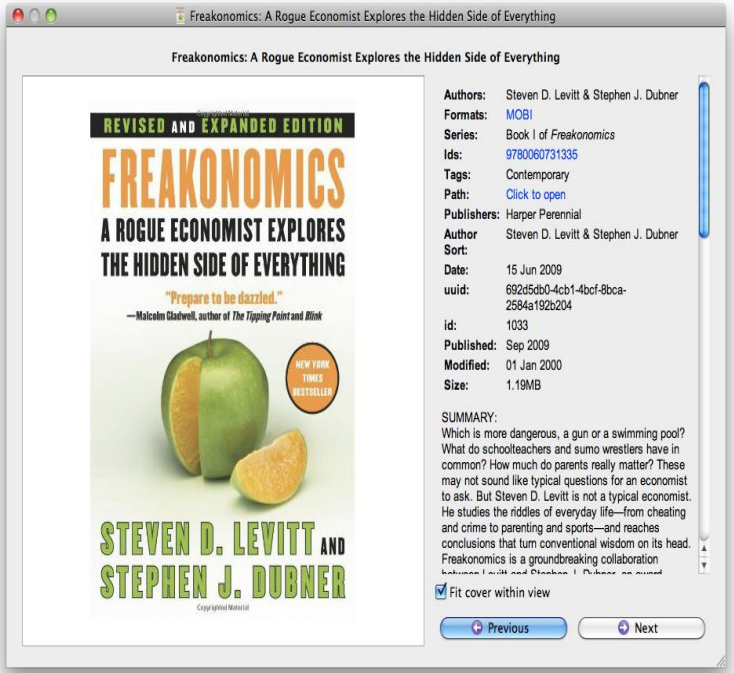
WHERE is it geographically?

HOW were the data developed?

WHY were the data developed?

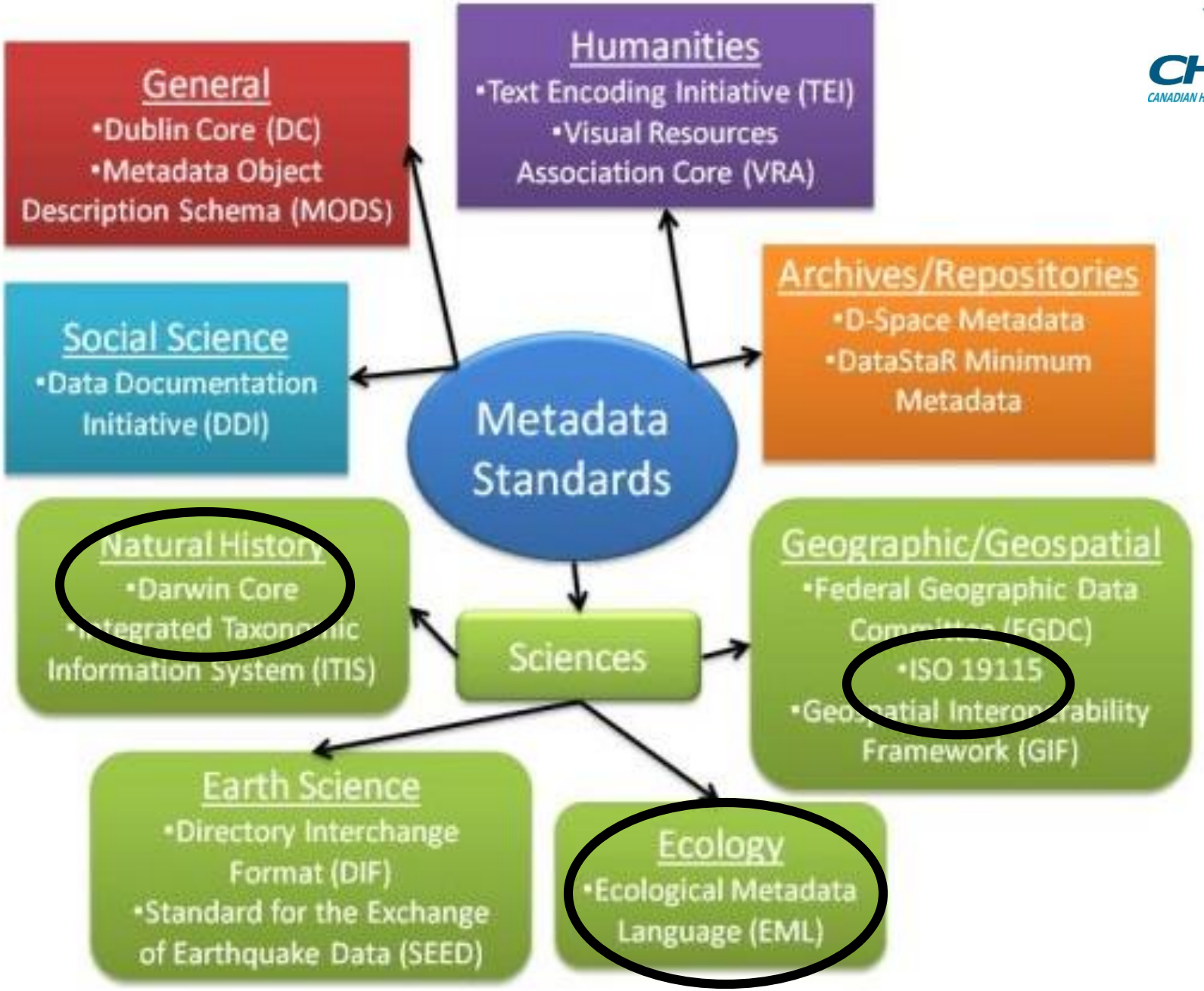
Metadata is everywhere..





Metadata

- is data documentation
- completes a dataset
- captures critical information about the content of a dataset
- essential for data to be discovered, accessed, and re-used
- metadata standards provides structure and consistency to data documentation



http://dal.ca.libguides.com/rdm

Metadata

Identification -- What is the name of the data set? Who developed the data set? What themes of information does it include? How current are the data?

Methodology – What methods were used to create/collect data? What equipment/software were used?

Data Quality -- How good are the data? What is the precision/accuracy? Is information available that allows a user to decide if the data are suitable for his or her purpose? Are the data complete? Were the data verified for quality control?

Spatial Reference – What geographic coverage is the data? Are coordinate locations encoded using longitude and latitude? What horizontal and vertical datums are used?

Temporal Reference – What temporal coverage is the data? Is data continuous or discrete?

Entity and Attribute Information -- What information is included? Were codes, acronyms or units of measure used? What do these mean?

Taxonomic Coverage -- What taxa are included in the data?

Access and Sharing -- From whom can I obtain the data? What formats are available? Are the data available online? What is the price of the data? Are there restrictions on accessing or using the data?

Metadata: What are they good for?

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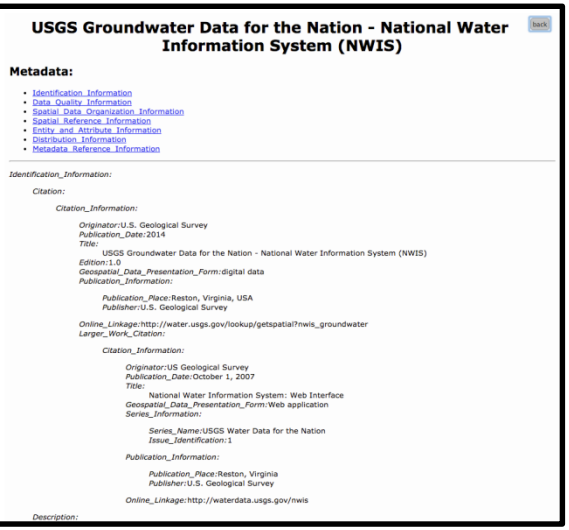
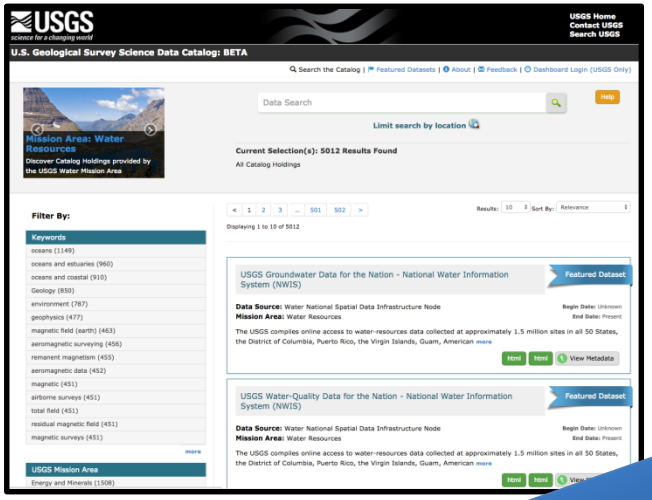
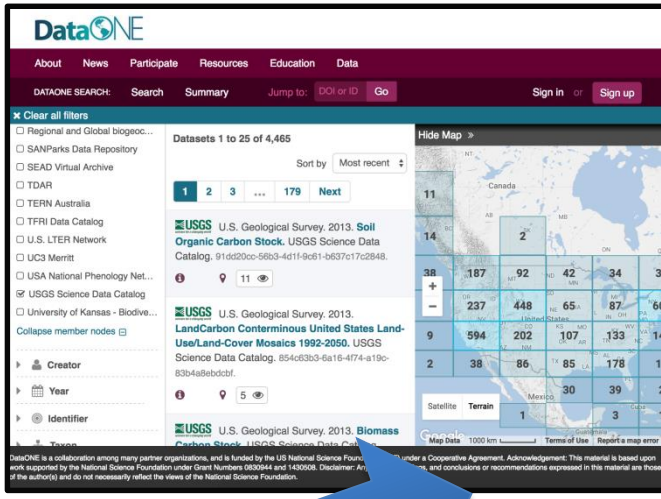






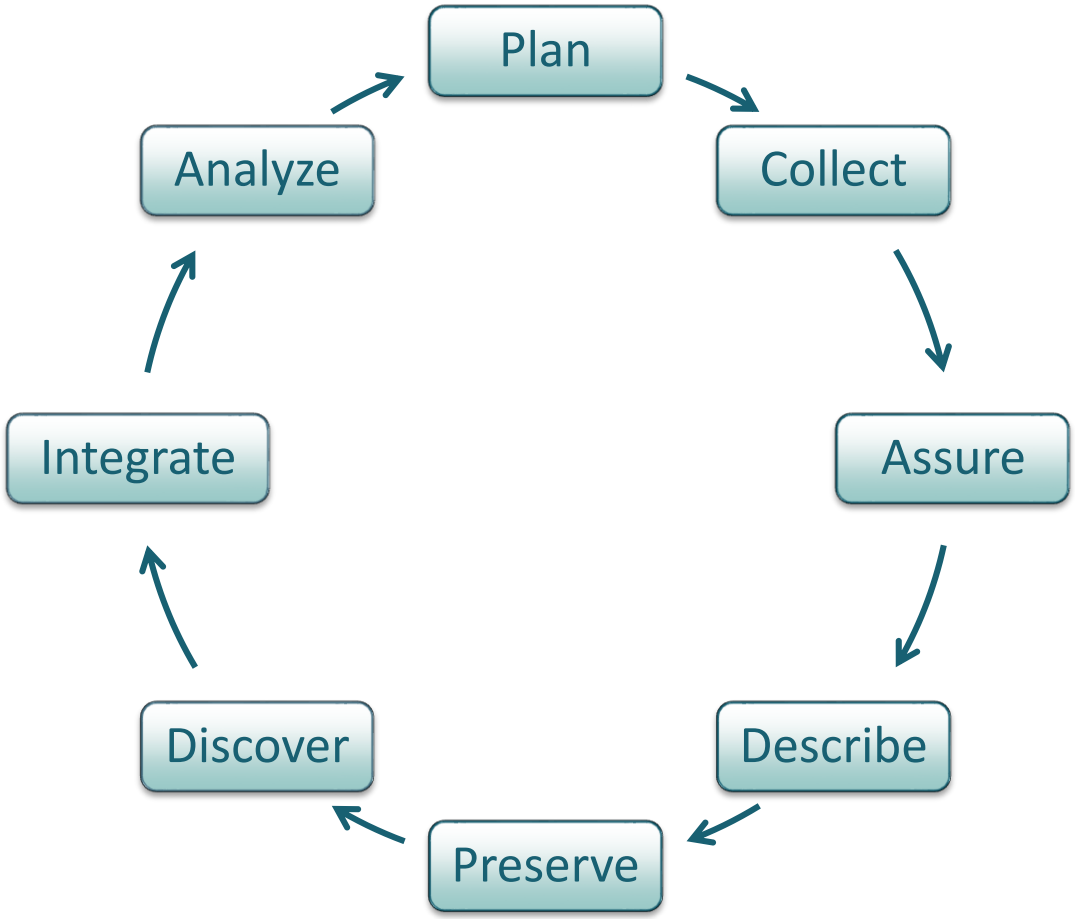
Data Repository:
Enables exchange
e.g. Dryad

Data Catalog:
Enables discovery
e.g. CHONe website

Metadata:
Captures information
e.g. EML

Tips for Writing Quality Metadata

Metadata should be developed continuously throughout the entire data lifecycle



Tips for Writing Quality Metadata

Which title is better?

"Crabs in the Atlantic "

OR

"Occurrence of Green Crab in Gilbert Bay Marine Protected Area (2015-2016) CHONe Project 1.1.1"

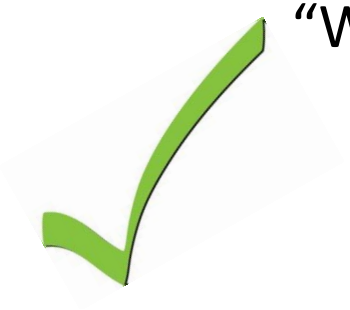
"Occurrence of Green Crab **(what)** in Gilbert Bay Marine Protected Area **(where)** (2015-2016) **(when)** CHONe Project 1.1.1" **(who)**

Tips for Writing Quality Metadata

Which description is better?

"We checked our work and it looks complete. "

OR



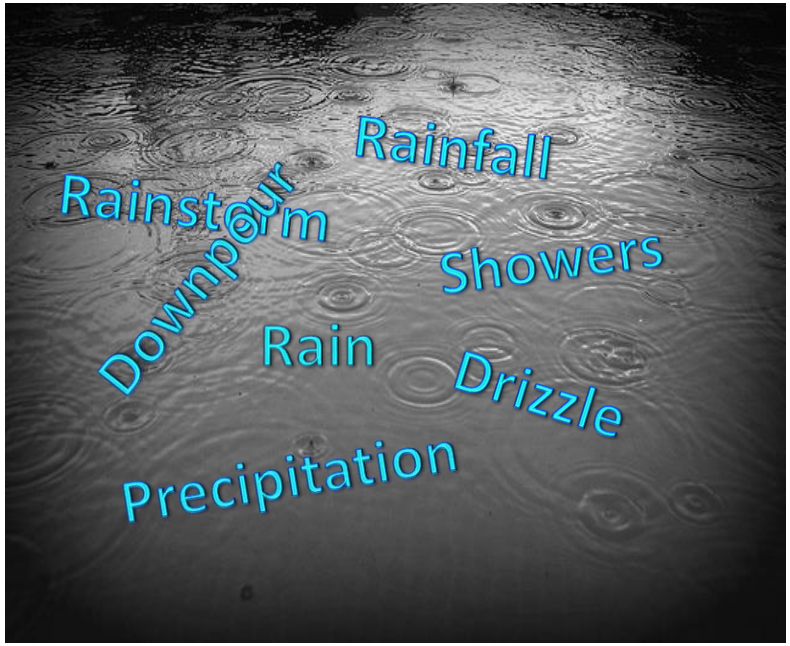
"We checked our work using a random sample of 5 monitoring sites reviewed by 2 different people. We determined our work to be 95% complete based on these visual inspections."

Be specific and quantify when you can! The goal of a metadata is to give the user enough information to know if they can use the data without contacting the dataset owner.

Tips for Writing Quality Metadata

Use Standard Vocabulary

- Marine taxon (**WoRMS**)
- **Darwin Core** terms
- Place name and area (**Marine Regions**)



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Tips for Writing Quality Metadata

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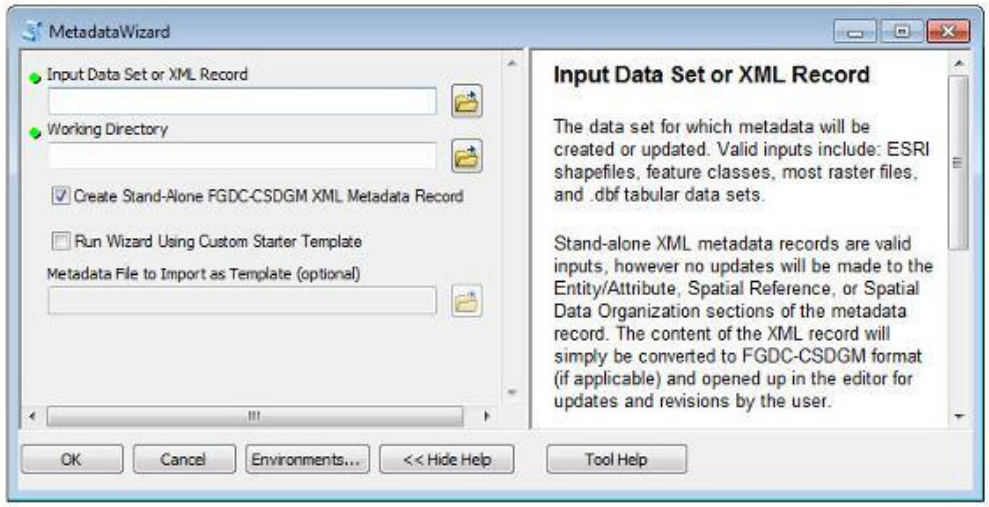
Use a Metadata Tool

- **Morpho** (EML, Darwin Core)
- **MetadataWizard** (GIS data)



USGS
science for a changing world

Tips for Writing Quality Metadata

Consistency with commonly used fields

Examples for a FGDC CSDGM record:

Publisher:

<publish>**U.S. Geological Survey**</publish>

<publish>**USGS**</publish>

Date:

<pubdate>**MM/DD/YYYY**</pubdate>
<pubdate>**May 27, 2003**</pubdate>

<pubdate>**YYYYMMDD**</pubdate>
<pubdate>**YYYY**</pubdate>

Location:

<placekt>**Geographic Names Information System**</placekt>
<placekey>**Roosevelt National Forest**</placekey>

<themekey>Roosevelt Forest</themekey>

Steps to Create Quality Metadata

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1. **Organize your information**
   - Did you write a project abstract to obtain funding for your proposal? Re-use it in your metadata!
   - Did you use a lab notebook to record measurements and other parameters?
   - Do you have the contact information for colleagues you worked with?
   - What about citations for other data sources you used in your project?
2. **Write your metadata using a metadata tool**
3. **Review for accuracy and completeness**
4. **Have someone else read your record**
5. **Revise the record, based on comments from your reviewer**
6. **Review once more before you publish**

Metadata Resources:

Data One: Education Modules

Dalhousie Library: Guide to Research Data Management

UBC Library: Research Data Management

Me (the Data Manager): angela.grant@mun.ca, 1-(709)-864-2298, or on the CHONe Slack page.