



Metadata Working Group

Federica Foglini
(CNR-ISMAR)

TSCOM-SCRUM meeting
Canberra 12 – 13 November 2018

Outline

Metadata concept – why metadata?

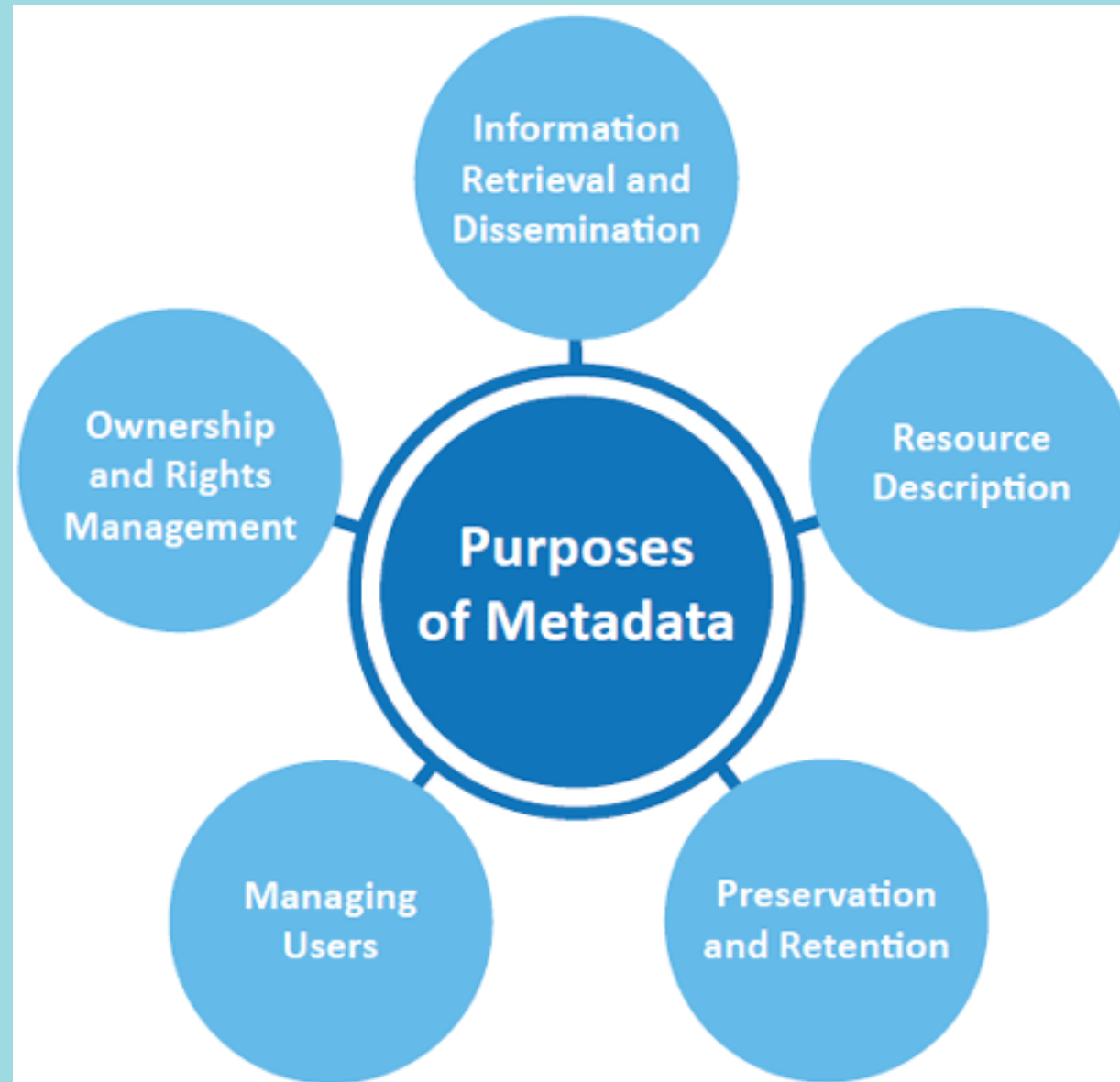
Metadata Working Group overview and Scope

Results of the survey about metadata needs:

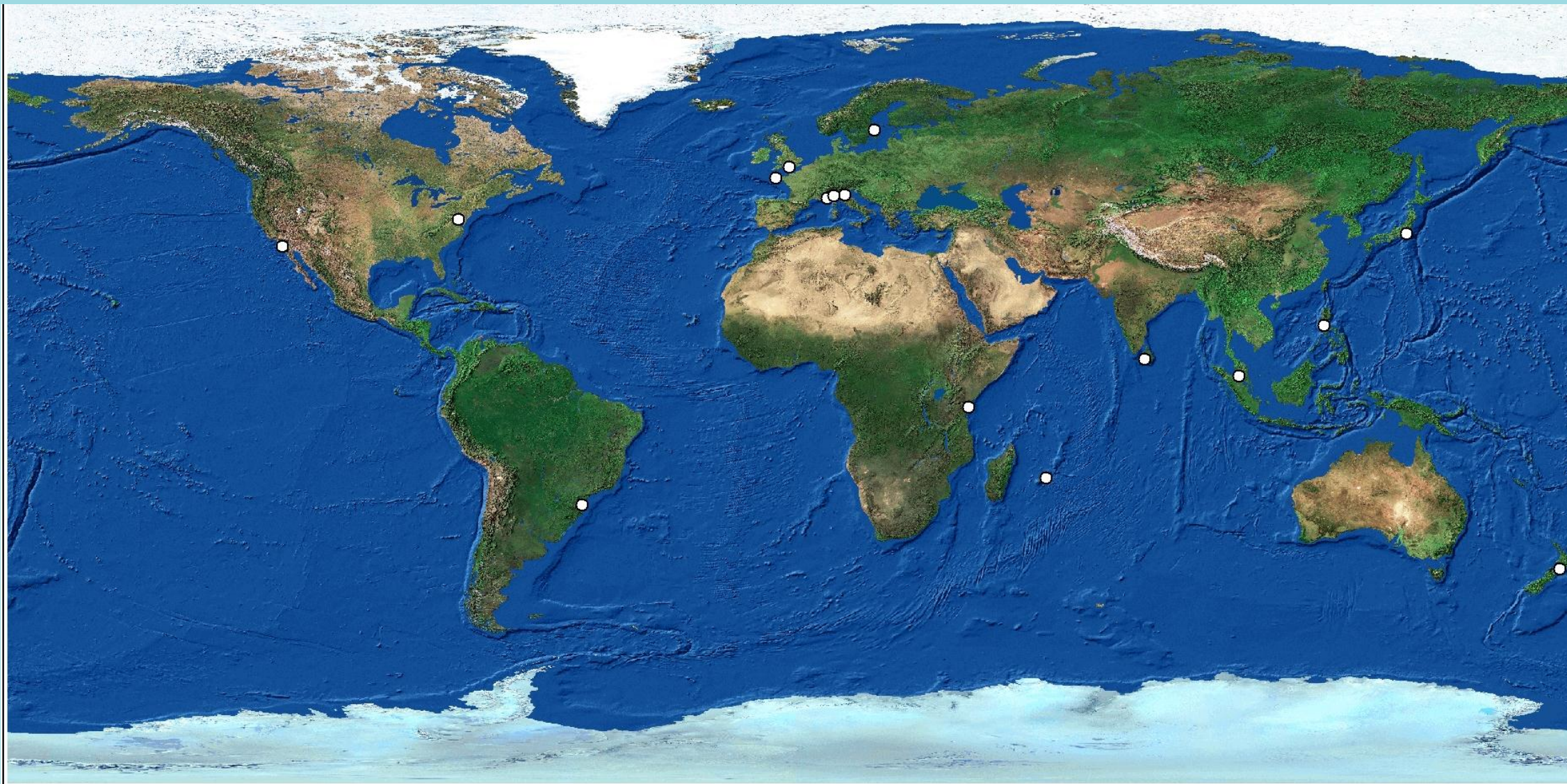
- *Data formats*
- *Repositories*
- *Standards*
- *Tools for metadata*

Conclusions and Next steps

WHY METADATA?



METADATA WORKING GROUP OVERVIEW



25 volunteers from 17 different institutions

METADATA WORKING GROUP OVERVIEW

	Name	Insitution	Country
1	Aaron Rosenberg	NOAA	USA
2	Amon Kimeli	KENYA	Kenya
3	Azmi Bin Rosedee	NATIONAL HYDROGRAPHIC CENTRE	Malaysia
4	Cecile Pertuisot	IFREMER	France
5	Davide Sandwell	SCRIPPS	USA
6	Dr H. Runghen	MINISTRY OF DEFENCE AND RODRIGUES	Port Louis
7	Eric Mussat	IFREMER	France
8	Federica Foglini (Chair)	CNR ISMAR	Italy
9	Geoffroy Lamarche	NIWA	New Zeland
10	Glen Rowe	NIWA	New Zeland
11	Hiroaki Saito	JHOD	Japan
12	Ivaldi Roberta	IIM	Italy
13	Jaya roperez	UNH CCOM	Manila
14	Jenny Black	GNS	New Zeland
15	Karen Marks (Observer)	NOAA	USA
16	Kevin Mackay	NIWA	New Zeland
17	Nilupa Samarakoon	NARA	Sri Lanka
18	PÂMELLA Roberta Marques	CHM	Brasil
19	Pauline Weatherall	BODC/NOC	UK
20	Prasadh Gunasinghe	NARA	Sri Lanka
21	Rezwan Mohammad	STOCKHOLM UNIVERSITY	Sweedden
22	Roshan Ranaweera	NARA	Sri Lanka
23	Thierry Schmitt	SHOM	France
24	Tilmann Steinmetz	NIWA	New Zeland
25	Tony Pharaoh	IHO	Principality of Monaco

METADATA WORKING GROUP SCOPE

The aim of the group is to produce Metadata guidelines to support the activity of Gebco-NF-Seabed2030.

The main objectives of the MWG are:

1. Review of the **metadata standards, tools and catalogues** in use within the involved participant institutions and implemented within national and international projects.
2. Review of **metadata vocabularies and thesaurus**.
3. Discuss the advantages and disadvantages of different standards and tools in relation to **Gebco-NF-Seabed2030 activities**.
4. Discuss possible interaction among **ongoing metadata initiatives**.
5. Produce **metadata Guidelines and best practice** for bathymetric and related data.

Metadata survey - Review of the metadata standards, tools and catalogues

1. **What kind of data** are you collecting, storing and managing (spatial data, records, tables, please specify data format If possible)
2. Are you usually **implementing metadata** to describe your data?
3. What kind of **metadata standards** are you using for your own data?
4. Do you think the **existing standards are fitting your needs**? If not, please provide explanation
5. Are you managing you metadata using a **metadata catalogue**? If yes can you provide info about your metadata catalogue
6. Are you aware about the existing **national and international metadata repositories**? If yes please provide a list.
7. Are you usually **providing metadata** to the existing data catalogues? If so how frequent?
8. Do you think the **existing catalogues are fitting your needs**? If not, please provide explanation.
9. What do you think about the **usage of metadata for bathymetric data**?

Question 1: What kind of data are you collecting, storing and managing (spatial data, records, tables, please specify data format If possible)

Common data type: **Bathymetric data, topography and coastline**

Common data format:

- Multi Beam Raw data (**vendor format**);
- Single Beam Raw data (**.csv or .shp file**);
- Multi Beam Gridded Bathymetry (**.xyz, .grd, ascii, NetCDF**);
- Navigation data (**.txt**).

2. Are you usually implementing metadata to describe your data?

Yes, systematically when indexing data in our database.

Generally basic information like start/end of records, instrument, ship, chief scientist, sound velocity records (y/n) are always provided

For validated data and DTM, more metadata are indexed concerning tide correction, sound resolution, tide correction

Examples of Metadata template for data submission:

***BODC** provides a metadata template for data submissions:*

https://www.bodc.ac.uk/submit_data/submission_templates/

NOAA NCEI maintains extensive archives of bathymetric data and other data. NCEI has a web interface to make submitting data and creating metadata easy:

(<https://www.nodc.noaa.gov/submit/index.html>).

3. What kind of metadata standards are you using for your own data?

- ISO 19115
- International Oceanographic Data and Information Exchange IODE
- metadata conventions CF-1.6 and ACDD-1.3.
- BODC lists (instrument/parameter wise).

4. Do you think the existing standards are fitting your needs?



5. Are you managing your metadata using a metadata catalogue? If yes can you provide info about your metadata catalogue

- Geonetwork
- In-house software is used to generate data set descriptive/discovery metadata from information held in a database for data series delivered through BODC's web site
- IFREMER: Raw + validated catalogue: <http://donnees-campagnes.flotteoceanographique.fr/> + http://seadatanet.maris2.nl/v_cdi_v3/search.asp + http://www.emodnet-bathymetry.eu/v_cdi_v3/browse_step.asp
- DTM: <https://sextant.ifremer.fr/en/geoportail/sextant#/search?from=1&to=20>

Données de campagnes océanographiques françaises

Rechercher partout

Rechercher des données

264077 Résultat(s)

FICHER	TYPE DE DONNEES	CAMPAGNE	ANNEE	NIVEAU DE TRAITEMENT	FORMAT	TA
201800074355.nvi	NAVIGATION VALIDEE DES CAMPAGNES OCEANOGRAPHIQUES FRANCAISES	TR_BRESEY	2018	DONNEES CONTROLEES	NAVIGATION .NVI 1999	23 KB
201800081655.nvi	NAVIGATION VALIDEE DES CAMPAGNES OCEANOGRAPHIQUES FRANCAISES	TR_HAVBRE	2018	DONNEES CONTROLEES	NAVIGATION .NVI 1999	6 KB
201800072845-sbdpth-hydrology-EU_SBE21.ths	DONNEES DE SALINITE DE SURFACE	TR_SETSEY	2018	DONNEES BRUTES	TSG TECHSAS Netcdf	52 by
201800072845-sbdpth-EU_EK038.dept.h	BANQUE NATIONALE DE BATHYMETRIE MONOFAISCEAU	TR_SETSEY	2018	DONNEES BRUTES	BATHY. VERT. NetCDF	1 KB
201800072845-sbdpth-	BANQUE NATIONALE DE BATHYMETRIE	TR_SETSEY	2018	DONNEES BRUTES	BATHY. VERT. NetCDF	1 KB

Initialiser les facettes

ZONE GÉOGRAPHIQUE

ANNÉE

2018 (3020)

2017 (6322)

2016 (29374)

2015 (24823)

Sextant

Infrastructure de données géographiques marines et littorales

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OGC Services

Documentation

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MEDITERRANEAN SEA ALONG-TRACK L3 SEA SURFACE HEIGHTS REPROCESSED (1993-...)

Short description: Altimeter satellite along-track sea surface heights anomalies (SLA) computed with respect to a twenty-year 2012 mean. All the missions are homogenized with respect to a reference mission (see QUID ...)

Source: E.U. Copernicus Marine Service Information

GLOBAL OCEAN ALONG-TRACK L3 SEA SURFACE HEIGHTS REPROCESSED (1993-ONGOING)

Short description: Altimeter satellite along-track sea surface heights anomalies (SLA) computed with respect to a twenty-year 2012 mean. All the missions are homogenized with respect to a reference mission (see QUID ...)

Source: E.U. Copernicus Marine Service Information

EUROPEAN OCEAN ALONG-TRACK L3 SEA LEVEL ANOMALIES NRT TAILORED FOR DATA ASS...

BLACK SEA ALONG-TRACK L3 SEA LEVEL ANOMALIES REPROCESSED (1993-ONGOING)

General Bathymetric Chart of the Oceans

United Nations Educational, Scientific and Cultural Organization

Intergovernmental Oceanographic Commission

6. Are you aware about the existing national and international metadata repositories? If yes please provide a list.

NOAA - National Centers for Environmental Information formerly National Oceanographic Data Center

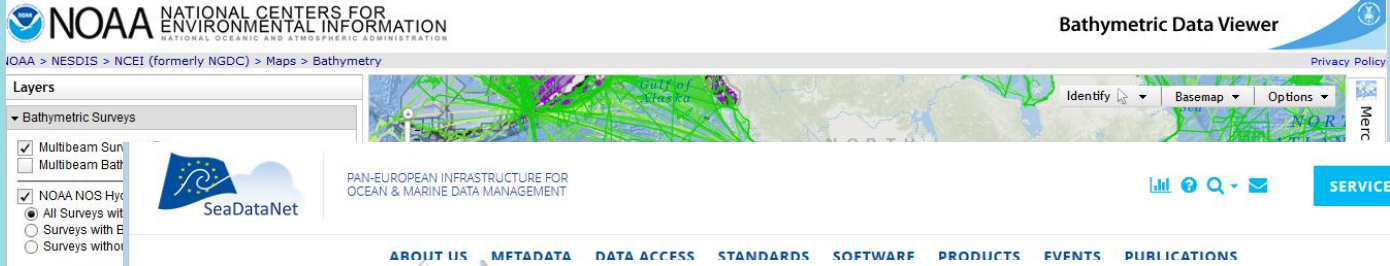
SeaDataNet

INSPIRE

IHO DCDB

Pangea

Long LIST in the GEBCO CookBook!



NOAA NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Bathymetric Data Viewer

Layers

- ☒ Bathymetric Surveys
 - ☒ Multibeam Swath
 - ☐ Multibeam Bathymetry
 - ☒ NOAA NOS Hydrographic Surveys
 - ☒ All Surveys with E
 - ☐ Surveys with E
 - ☐ Surveys without E
 - ☐ BAG Footprint
 - ☐ BAG Color Shaded
 - ☐ Single-Beam Swath
 - ☐ Single-Beam Bathymetry
- ☐ Search Bathymetry

Digital Elevation Models

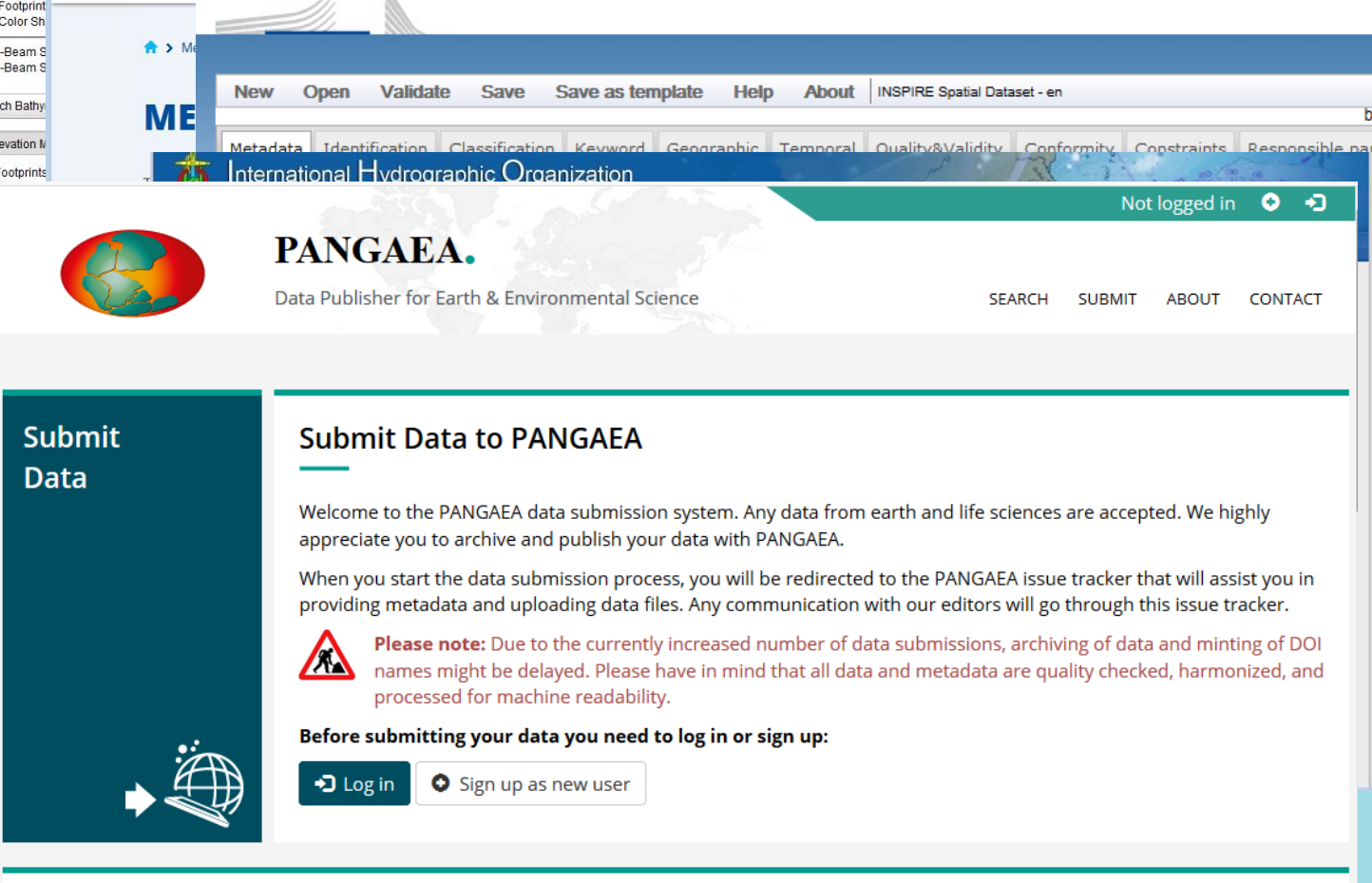
- ☐ DEM Footprints
- ☐ DEM

Coastal

- ☐ Topography

More Info

Waiting for...



INSPIRE Spatial Dataset - en

Metadata Identification Classification Keyword Geographic Temporal Quality&Validity Conformity Constraints Responsible party

International Hydrographic Organization

Not logged in

PANGAEA.
Data Publisher for Earth & Environmental Science


SEARCH SUBMIT ABOUT CONTACT

Submit Data

Submit Data to PANGAEA

Welcome to the PANGAEA data submission system. Any data from earth and life sciences are accepted. We highly appreciate you to archive and publish your data with PANGAEA.

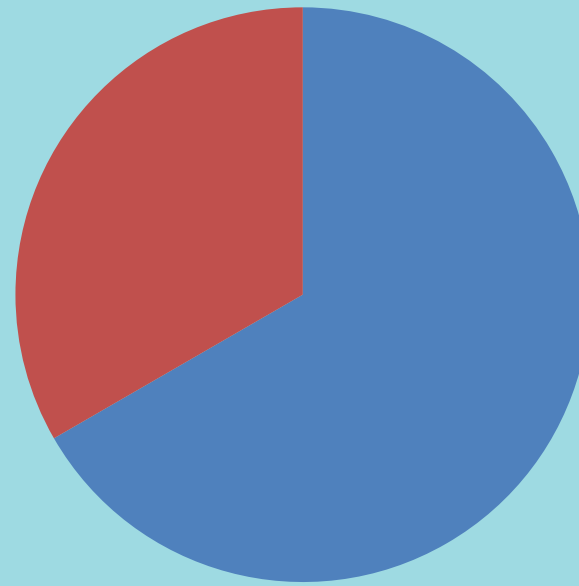
When you start the data submission process, you will be redirected to the PANGAEA issue tracker that will assist you in providing metadata and uploading data files. Any communication with our editors will go through this issue tracker.

 **Please note:** Due to the currently increased number of data submissions, archiving of data and minting of DOI names might be delayed. Please have in mind that all data and metadata are quality checked, harmonized, and processed for machine readability.

Before submitting your data you need to log in or sign up:

[Log in](#) [Sign up as new user](#)

7. Are you usually providing metadata to the existing data catalogues? If so how frequent?



■ yes

■ no

- No specific time scale

8. Do you think the existing catalogues are fitting your needs? If not, please provide explanation.



Survey CONCLUSIONS

Generally Metadata importance is well understood and metadata used by most of the institutions collection and processing bathymetric data

There are different standards in use

There are different metadata catalogues known by the institutions (list was provided)


Different metadata standard are also applied depending on the data type: between raw data, navigation data, processes data and validated data.

NEXT STEPS - DISCUSSION KEY POINTS

- Relevance of metadata for GEBCO and SEABED 2030
- Recognise the definition and usage of metadata for GEBCO and SEABED 2030:
 1. Metadata describing the quality of the product assessing the processing standard and workflow
 2. Metadata describing the source data giving the possibility of looking for gridded data or raw data.
- What kind of standard should be applied?
- Should we create a GEBCO metadata catalogue or create link to existing ones (e.g. NOAA, SeaDataNET, EMODnet).
- Discuss possible interaction **ongoing metadata initiatives.**

NEXT STEPS - DISCUSSION KEY POINTS

DISCUSSION FORUM



IHO / OHI > IHO > GEBCO Metadata Working Group

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GEBCO Metadata Working Group

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Topic	Replies	Views	Started by	Last Post ▲
 Metadata Survey	0	414	Federica Foglini	Mon Jul 16th, 2018 05:30 pm by Federica Foglini ▾
 Welcome to Metadata Working Group Welcome message	1	1,374	Federica Foglini	Sun Feb 4th, 2018 11:52 pm by Roshan Ranaweera ▾
 Action 2: Collection of presentation Collection of presentation (.ppt or .pdf with notes) showing the Metadata standards, tools and catalogues in use within different instituting and ongoing projects.	0	564	Federica Foglini	Wed Jan 31st, 2018 09:38 pm by Federica Foglini ▾
 Action 1: Collection of general information about metadata standards, tools and catalogues from MWG	0	501	Federica Foglini	Wed Jan 31st, 2018 09:37 pm by Federica Foglini ▾

Current time is 03:54 pm [XML](#)

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THANKS!

