DRAFT

Work plan

Project Title: GEBCO Tool for Metadata implementation

Project Overview

Metadata plays a critical role in the work of the General Bathymetric Chart of the Oceans (GEBCO) by providing essential context and details about the bathymetric data collected. Metadata helps users understand the who, what, when, where, why, and how of the data. It includes details such as the source of the data, the date and time of collection, the methods and instruments used, the resolution, accuracy, and even the purpose for which the data was collected. For GEBCO, this means that metadata enables users to assess the quality and relevance of bathymetric data for various applications, from scientific research to marine navigation, environmental monitoring, and policymaking. Metadata is not just supplementary information for GEBCO; it is the backbone that supports the integrity, usability, and global impact of its ocean mapping efforts.

The project aims at implementing a metadata management tool enabling data centres to prepare XML metadata files that align with GEBCO's specific metadata schema. The tool would be tailored to support the GEBCO metadata schema, ensuring that all required fields for bathymetric data are covered.

Project Goals:

- Review the exiting metadata management tools such as MIKADO implemented in the framework of seadanet project and EMODNET and cruise pack implemented by DCDB https://www.ncei.noaa.gov/products/cruisepack.
- Assess GEBCO's requirements to support its metadata schema and the updated minimum metadata requirements.
- Determine the controlled vocabulary to be used for GEBCO
- Leveraging from exiting tools, develop the GEBCO metadata management tool with the following key features:

1. **Custom Metadata Schema**: The tool would be tailored to support the GEBCO metadata schema, ensuring that all required fields for bathymetric data are covered.

2. **Manual and Automatic XML Generation**: Like the Mikado, this tool should allow users to manually create XML metadata files or automatically generate them by interfacing with local databases. This flexibility would make it easier for data centers to quickly generate metadata for large volumes of bathymetric data while maintaining the accuracy and completeness required by GEBCO standards.

3. **Local Metadata Collection Management**: The tool would allow data centres to manage their XML metadata entries as a local collection, facilitating easy updates and

organization of bathymetric datasets. Users could also maintain version control, track changes, and manage metadata for large-scale mapping projects efficiently.

4. **Integration with GEBCO Vocabularies:** The adapted tool would integrate with relevant GEBCO controlled vocabularies. This could include syncing with vocabularies for geographic names, data acquisition technologies, and institutions involved in data collection. The GEBCO tool should access updated vocabularies and standards through online services when needed.

5. **Data and Metadata Quality Control**: An important feature would be built-in validation tools to ensure that all metadata entries conform to GEBCO's standards and best practices. This would help prevent errors and inconsistencies in the metadata, ensuring data quality and reliability for users relying on GEBCO's global bathymetric datasets.

6. **User-Friendly Interface**:The tool would maintain a user-friendly interface, ensuring that data managers with varying levels of technical expertise can easily create and manage GEBCO-compliant metadata.

Time line (to be agreed with the metadata implementation working group)

Presentation of the project to the GEBCO GGC-41: 4-8 November 2024

Demonstration of a prototype tool November 2025

Dissemination of the new tool January 2025

Task Description	Start Date	End date	Responsible party
Phase 1: Planning			
1.1 Define project scope	15/10/2024	15/11/2024	TSCOM, DCDB
1.2 Identify key stakeholder			TSCOM, DCDB
1.3 identify and analyse available tools for metadata management	15/11/2024	31/12/2024	TSCOM, DCDB, Sebed2030
1.4 Identify partner for implementation and budget	15/11/2024	31/12/2024	TSCOM
Phase 2. Execution			
2.1 Define specific GEBCO requirements for metadata			TSCOM, DCDB
2.2 Define GEBCO Vocabularies			TSCOM
2.3 Identify exiting Metadata management tools	Nov 2024	January 2024	TSCOM, SCRUM, DCDB
2.4 Create the GEBCO Metadata Management tool	January 2024	January 2026	TSCOM
Phase 3:			

2.5 Document workflow for dissemination to the GEBCO sub committee and Seabed 2030	September 2025	November 2025	TSCOM, SCOPE, SCRUM
2.6 Develop a demonstration for presentation at GEBCO GGC-42	September 2025	November 2025	TSCOM
Phase 3 Monitoring and control			
Regular progress update	November 2024	January 2025	TSCOM
Adress risk and issue			TSCOM
Phase 4 Closure			
4.1 Review of project outcomes			TSCOM, DCDB

Deliverables

- Tool for GEBCO metadata management
- Guidelines and protocols for Seabed 2030 Data centre

Roles and Responsibilities:

Project manager: Federica Foglini TSCOM vice-chair and chair for the Metadata implementation working Group

Coordinator: George Spoelstra, TSCOM Chair

Team member1: Jennifer Jencks, DCDB Director, TSCOM Member: Represent DCDB as the IHO data center host, an external service provider, and the potential host and future responsible party for the coverage services generated as part of this project

Additional DCDB staff

Team Member 2: Pauline Weatherall NOC and Global centre

Team memeber3: Seabed 2030 Regional Centres

Communication plan

Primary Team Members (TSCOM, DCDB): Monthly

Budget

20000 euro

Funding

- TSCOM

Approval:

- Evert Flier, GEBCO GGC Chair
- Jamie McMichael-Phillips, Seabed 2030 Project Director