NOAA CoMET Tool and the Maturity Matrix Self-Assessment

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Virtual
Collection Metadata Editing Tool (CoMET)

NOAA’s User Interface for creating, editing, and managing collection metadata and assessing Data Stewardship Maturity
CoMET Dataset Metadata Editor

- Supports ISO 19115-2 standard
- Follows NOAA and NCEI guidance
- Implements version control and history
- Enables import of ISO components from external sources
CoMET Dataset Metadata Editor

- Provides autocompletion of keywords, including NASA’s GCMD
- UI is built upon CoMET APIs, which can also be leveraged by external tools
- Commonly used ISO components can be referenced
- Users can create new records, delete, edit, change, save and re-use records.
Groups enable sharing of duties and roles across a team (ex. author, reviewer).
CoMET Dataset Views

Records can be viewed in multiple formats

**HTML Landing Page**

**XML ISO 19115-2**
CoMET Rubric Assessment

- The NOAA Rubric V2 assesses a record for adherence to NOAA metadata best practices
- A higher score indicates more complete documentation
- Can be used as a measure of documentation maturity
Data Stewardship Maturity Matrix

- Consistent framework for assessing and reporting quantifiable stewardship practices
- Allows for greater stewardship quality transparency and contributes to the reproducibility of NOAA’s data products.
- Developed jointly by domain experts leveraging institutional knowledge and community best practices and standards
- Vetted through use case studies with diverse datasets managed by different organizations, in collaboration with NC State University, NCEI Data Stewardship Division, and U.S. and international data stewardship groups.
Guidance, Templates, Tools

- Developed training materials, templates, tools and automation of some features.
- Assessed more than 800 datasets for NOAA OneStop
- Not sustainable as a manual process
Data Stewardship Maturity Questionnaire

Streamlined Assessment Process

- Provides a user friendly set of questions to input and obtain maturity score for each key component and overall
- User doesn’t need to understand the DSMM to answer the questions.
- Questionnaire covers all **nine key components** of the maturity model:

  Preservability, Accessibility, Usability, Production Sustainability, Data Quality Assurance, Data Quality Control/Monitoring, Data Quality Assessment, Transparency/Traceability, Data Integrity
DSMQ Assessment

- DSMQ improves upon manual assessments by reducing inconsistencies standardized multiple choice questions
- Questionnaire is incorporated into CoMET UI allowing users to create records, delete, edit, change, save, re-use and share
- Assessment ratings are stored and displayed in real-time
DSMQ Ease of Use

- Collection Metadata records can be imported to fast track the assessment
- Users can hover over phrases to obtain more information
- Green “Evaluate Questionnaire” button in the upper right hand corner provides a score for each section
Data Stewardship Maturity Report:

- Automatic generation of human readable, government regulation compliant, documents containing consistent, content-rich assessment information for data products.
- Reports will receive a DOI, be preserved by the NOAA Central Library and linked to the data metadata and DOI.
- Anticipated completion June 2021
Overall rating is inserted into the collection metadata record which is displayed in the NOAA OneStop search and discovery UI on the dataset landing page.
CoMET Release Status

- Initial production release - December 2020
- Full production release - June 2021
- Expected public release - September 2021