



RÉPUBLIQUE  
FRANÇAISE

*Liberté  
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**CNIG**

Conseil national  
de l'information  
géographique

# GT QUADOGÉO

Point normalisation

Marie Lambois, IGN

# FAIR Data Quality workshop (pot pourri)

*"Quality is never an accident. It is always the result of intelligent effort."*  
- John Ruskin

Pointe à Colombier, Saint-Barthélemy – IGN

# FAIR



Graphic adapted from GDC FAIR Interpretation

# International FAIR-DQI Community Guidelines Working Group

- International Community Guidelines for Sharing and Reusing Quality Information of Individual Earth Science Datasets
  - <http://doi.org/10.31219/osf.io/xsu4p>
  - Définit un certain nombre de recommandations pour rendre la qualité FAIR

# Relevant Web standards

## A short overview..

### Data on the Web Best Practices

<https://www.w3.org/TR/dwbp/>

Provide [descriptive,  
structural] **metadata**

Provide **provenance** info

Provide **data quality** info

### Spatial Data on the Web Best Practices

<https://www.w3.org/TR/sdw-bp/>

Include **spatial metadata**

E.g. number of dimensions, spatial  
representation type, CRS,  
resolution

Describe **positional accuracy**

### GeoDCAT-AP

<https://semiceu.github.io/GeoDCAT-AP/drafts/latest/>

Includes a **Metric** class and a  
**QualityMeasurement** class which  
connect to DQV

### Data Catalog Vocabulary (DCAT)

<https://www.w3.org/TR/vocab-dcat-2/>

For describing **datasets** and **services**

Property **conformsTo**

Properties for **spatial** and **temporal**  
**Resolution**

### Data Quality Vocabulary

<https://www.w3.org/TR/vocab-dqv/>

For describing **your own quality measures**

Class: Quality Measurement

Class: Metric

Class: Dimension

Class: Category

Class: Quality Measurement Dataset

Class: Quality Policy

Class: Quality Annotation

Class: Quality Certificate

Class: User Quality Feedback

# Extensions for spatial and statistics

Accuracy

Completeness

Validity

Consistency

Currentness

Precision

Credibility

Traceability

Understandability

Positional  
accuracy

Spatial  
coverage

Geometric  
validity

Topological  
consistency

Geometric  
precision

Spatial

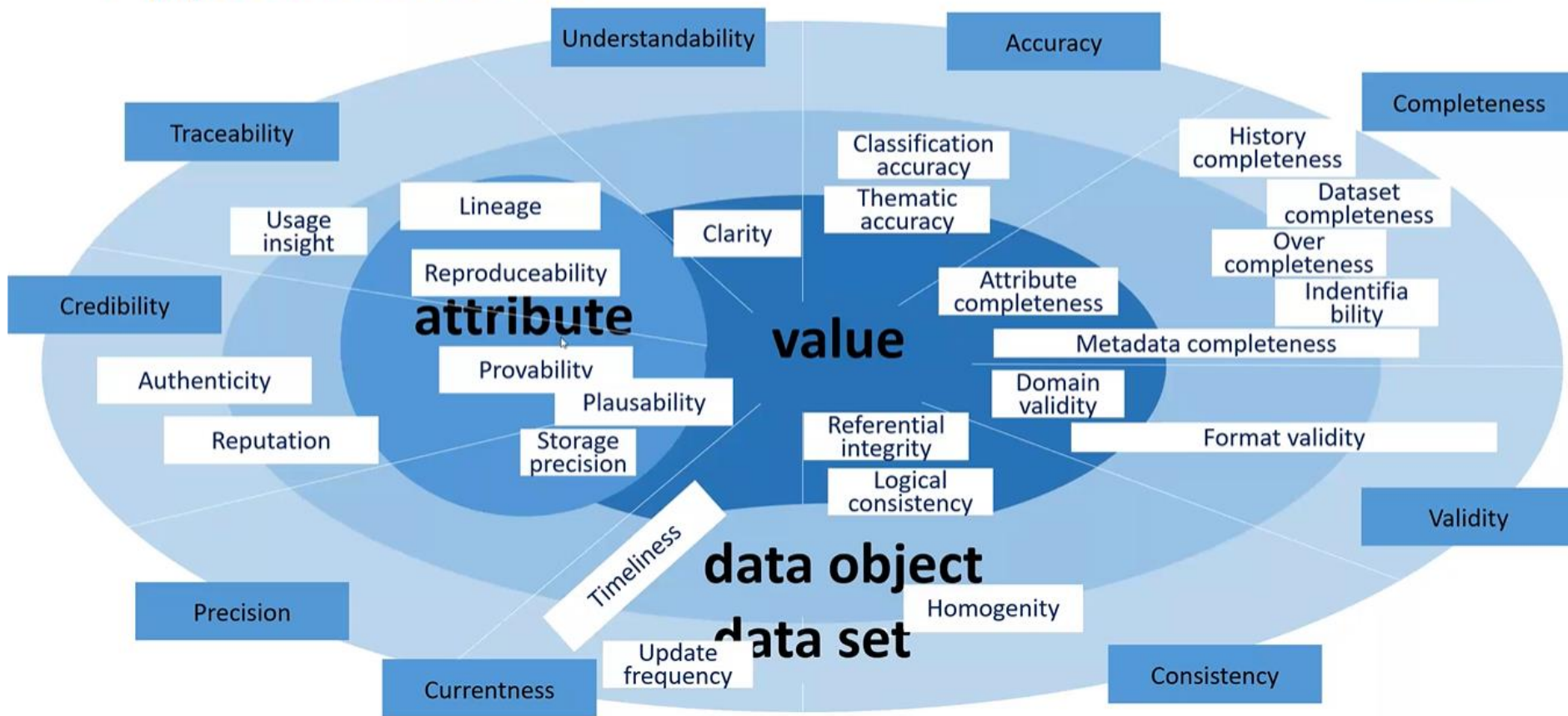
Quantitative  
accuracy

Statistical  
precision

Representativity

Statistics

# Application levels



# SMM-CD – A Self-Assessment Tool For Global Data (Partial View)

| Categories and Aspects       | Level 1<br>Ad Hoc<br>Not Managed                                                          | Level 2<br>Minimal<br>Limit Managed<br>Not Defined                                                     | Level 3<br>Intermediate<br>Managed<br>Defined, Partially<br>Implemented                 | Level 4<br>Advanced<br>Well Managed<br>Well-Defined, Fully<br>Implemented                      | Level 5<br>Optimal<br>Level 4 +<br>Measure, Controlled, Audited                                                              | The Data Access category refers to the ability to locate (Discoverability) and get to the dataset in question (Accessibility), with higher levels of maturity corresponding to the ease for a potential user to find and gain access to the dataset |          |
|------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|                              |                                                                                           |                                                                                                        |                                                                                         |                                                                                                |                                                                                                                              | WMO SMM-CD Rating and Justification or Evidence                                                                                                                                                                                                     | Comments |
| <b>Data Access</b>           |                                                                                           |                                                                                                        |                                                                                         |                                                                                                |                                                                                                                              |                                                                                                                                                                                                                                                     |          |
| <i>Discoverability</i>       | By personal contact only; Dataset information not discoverable.                           | Limited dataset information, such as scientific description of the methodology, available online.      | Level 2 + minimal catalogue-level metadata; Dataset searchable online.                  | Level 3 + comprehensive set of collection-level discovery metadata + minimal granule metadata. | Level 4 + available on an international catalogue, prominently displayed online and routinely updated.                       | ✧ Level                                                                                                                                                                                                                                             |          |
| <i>Accessibility</i>         | Data not available publicly; Person-to-person contact needed.                             | Basic online services available for data access (e.g., FTP/HTTP direct download).                      | Available via non-standard data services.                                               | Standard-based interoperability data services.                                                 | Level 4 + Full capability of sub-setting, aggregation and visualization.                                                     | ✧ Level                                                                                                                                                                                                                                             |          |
| <b>Usability &amp; Usage</b> |                                                                                           |                                                                                                        |                                                                                         |                                                                                                |                                                                                                                              | The Usability & Usage category describes how easily the data products may be understood and used by users and incorporated into the user's own working environment.                                                                                 |          |
|                              |                                                                                           |                                                                                                        |                                                                                         |                                                                                                |                                                                                                                              | WMO SSM-CD Rating and Justification or Evidence                                                                                                                                                                                                     | Comments |
|                              |                                                                                           |                                                                                                        |                                                                                         |                                                                                                |                                                                                                                              |                                                                                                                                                                                                                                                     |          |
|                              |                                                                                           |                                                                                                        |                                                                                         |                                                                                                |                                                                                                                              |                                                                                                                                                                                                                                                     |          |
|                              |                                                                                           |                                                                                                        |                                                                                         |                                                                                                |                                                                                                                              |                                                                                                                                                                                                                                                     |          |
| <i>Data Portability</i>      | Non-machine readable.                                                                     | Basic machine readable.                                                                                | Standards-based machine readable.                                                       | Machine independent, self-describing, interoperable format.                                    | Level 4 + capability of providing selected community formats.                                                                | ✧ Level                                                                                                                                                                                                                                             |          |
| <i>Documentation</i>         | Product information not publicly available online.                                        | Limited online documentation (e.g., User Guide).                                                       | Document on how the data product was created and how to use it, is available online.    | Comprehensive documentation based on a standard template and available online.                 | Level 4 + online tutorial on using and analyzing the dataset; Complete production system information available online.       | ✧ Level                                                                                                                                                                                                                                             |          |
| <i>Usage and Impact</i>      | No or weak citations in scientific publication in peer-review journal or as institutional | Intermediate citations + referenced in local organizational climate assessment reports (e.g., by NOAA) | Strong citations + referenced in national climate assessment reports (e.g., by USGCRP). | Level 3 + referenced in international climate assessment reports (e.g., by IPCC).              | Level 4 + referenced in international decision/policy making published reports (e.g., by UNFCCC, UN-ISDR, World Bank, etc.). | ✧ Level                                                                                                                                                                                                                                             |          |

- Stewardship Maturity Assessment Tools for Modernization of Climate Data Management
- <http://doi.org/10.5334/dsj-2021-007>

- Provides access to assessed and scored global, regional and national, and climate indicator datasets, spanning a variety of variables and data types. New version will become operational in Q1 2022.

|               |       |
|---------------|-------|
| Accessibility | ★★★★★ |
| Usability     | ★★★★☆ |
| Stewardship   | ★★★★☆ |

# Statut normes ISO

## ○ 19157-1

- Stade final
- Traduction réalisée
- Publication attendue en 2022

## ○ 19157-3

- Travaux débutent
- Groupe conjoint avec l'OGC
- Hébergement du registre a priori sur le definition server OGC :
  - <https://defs.opengis.net/vocprez/>
  - Ex :  
<https://defs.opengis.net/vocprez/object?uri=https%3A//www.opengis.net/def/security/1.0/codelist/authentication>
- Travaux jusqu'à la rentrée et publication 08/23





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