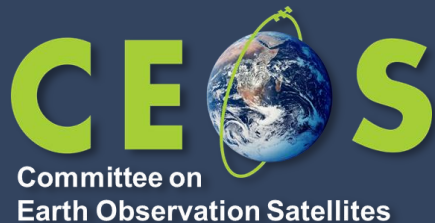


Feedback from the CEOS ARD Assessment Process



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(for Alexander Brooks)
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- ❖ Time consuming process
 - Locating metadata
 - Lack of tools to automate validation where possible
 - Manual data entry into assessment template

- ❖ Suggestions for high value improvement
 - Structured Metadata linking
 - Initial Automated Validation
 - Assisted PFS report automation

- ❖ The CEOS ARD assessment process is essential but currently labour intensive. Considerable time required to:
 - navigate metadata to manually checking against PFS requirements.
 - searching metadata structures that vary across providers

Surface Reflectance PFS

1.6	Map Projection	The metadata lists the map projection that has been used (or geographical coordinates, if applicable) and any relevant parameters required in relation to use of data in that map projection.	As threshold.	Yes	Yes	The map projection parameters are provided.
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XML Metadata

```
<MapProjection>UTM</MapProjection>|
<Ellipsoid>WGS_84</Ellipsoid>
<Datum>WGS84</Datum>
```

- ❖ Many checks across the PFS, such as CRS, collection dates, band information and metadata completeness, are still performed manually.

XML Metadata

```
<MapProjection>UTM</MapProjection>|  
<Ellipsoid>WGS 84</Ellipsoid>  
<Datum>WGS84</Datum>
```

- ❖ Thresholds, goals and standardised wording require repeated manual entry. Final summary tables also require manual updating.

1.6	Map Projection	The metadata lists the map projection that has been used (or geographical coordinates, if applicable) and any relevant parameters required in relation to use of data in that map projection.	As threshold.	Yes	Yes	The map projection parameters are provided.	Verified at Threshold, Goal Level not assessed.
1.7	Geometric Correction Methods	Not required. The user is not explicitly advised of the geometric correction source and methods.	Information on geometric correction methods should be available in the metadata as a single DOI landing page, including reference database and auxiliary data such as elevation model(s) and reference chip-sets.	Not Required	Yes		Not Required

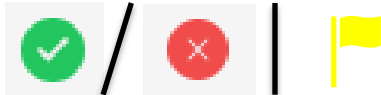


	Threshold	Goal
1. General Metadata		
1.1 Traceability	Not Required	Not Assessed
1.2 Metadata Machine Readability	Yes	Not Assessed
1.3 Data Collection Time	Yes	Not Assessed
1.4 Geographical Area	Yes	Not Assessed
1.5 Coordinate Reference System	Yes	Not Assessed
1.6 Map Projection	Yes	Not Assessed
1.7 Geometric Correction Methods	Not Required	Not Assessed

❖ Structured Metadata linking

XPATH = /CEOS_Metadata/MapProjection → UTM

❖ Automated Validation



❖ Assisted population of PFS review findings

1.6	Map Projection	The metadata lists the map projection that has been used (or geographical coordinates, if applicable) and any relevant parameters required in relation to use of data in that map projection.	As threshold.	Yes	Yes	The map projection parameters are provided.	Verified at Threshold, Goal Level not assessed.
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- ❖ Addressing these inefficiencies will make the CEOS ARD process more efficient, consistent and scalable as more datasets and suppliers participate.

32	EarthDaily Constellation	Under Development	Aquatic Reflectance	Surface Temperature
33	EnMAP	Under Development	Aquatic Reflectance	
34	Envisat MERIS	Under Development	Surface Reflectance	
35	ENVISAT NRB	Under Development	SAR-NRB	
36	ERS ATSR	Under Development	Surface Temperature	
37	ERS ATSR	Under Development	Surface Reflectance	
38	ERS-1/2 NRB	Under Development	SAR-NRB	
39	Fused S-2 & L-8/9 (Level-2F)	Under Development	Surface Reflectance	
40	Harmonised S-2 & L-8/9 (Level-2H)	Under Development	Surface Reflectance	
41	KOMPSAT-3/3A	Under Development	Surface Reflectance	
42	KOMPSAT-5 NRB	Under Development	SAR-NRB	