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NEW! CEOS Analysis Ready Data for Aquatic Reflectance

AQUATIC CEOS-ARD

CEOS Analysis Ready Data (CEOS-ARD) are satellite data that have been processed to a minimum set of requirements and organized into a form that allows immediate analysis with a minimum of additional user effort and interoperability both through time and with other datasets.

CEOS-ARD Product Family Specifications (PFS) have "Threshold" and "Target" requirements for both general and per-pixel metadata, and radiometric, atmospheric and geometric corrections.

This new Aquatic Reflectance (AR) PFS, specifically targeted to inland and coastal waters, was derived from CEOS land surface ARD with certain modifications and additions, by GEO-AquaWatch, Water-ForCE, and other subject matter experts.

There are two modified and ten new per-pixel metadata requirements, as well as one modified and eight new radiometric and atmospheric correction requirements.

2 per-pixel metadata requirements modified:

- Per-pixel Assessment
- Sea/Lake/River Ice Mask

10 new per-pixel metadata requirements identified:

- Adjacency Effects
- Altitude (ASL)
- Optically Deep or Optically Shallow Assessment
- Bidirectional Reflectance Distribution Function
- Deep/Shallow Water
- Floating Vegetation/Surface Scum Mask
- Whitecap/Foam Mask
- Sky Glint
- Turbid Water Flag
- Sun Glint

Product Alignment Assessment

Self-assessment: data providers self-assess their products to understand how well they meet the CEOS Analysis Ready Data Aquatic Reflectance Product Family Specification (PFS).

Peer-review: an independent assessment to confirm the CEOS-ARD AR product.

Conclusion

Earth observation of coastal and inland waters is maturing. The CEOS-ARD AR PFS facilitates:

- Operationalisation of this EO information.
- Comparisons of providers' ARD outputs.
- Increased professionalism of providers and therefore trust by end users.
- Identification of optimal areas of R&D.

