



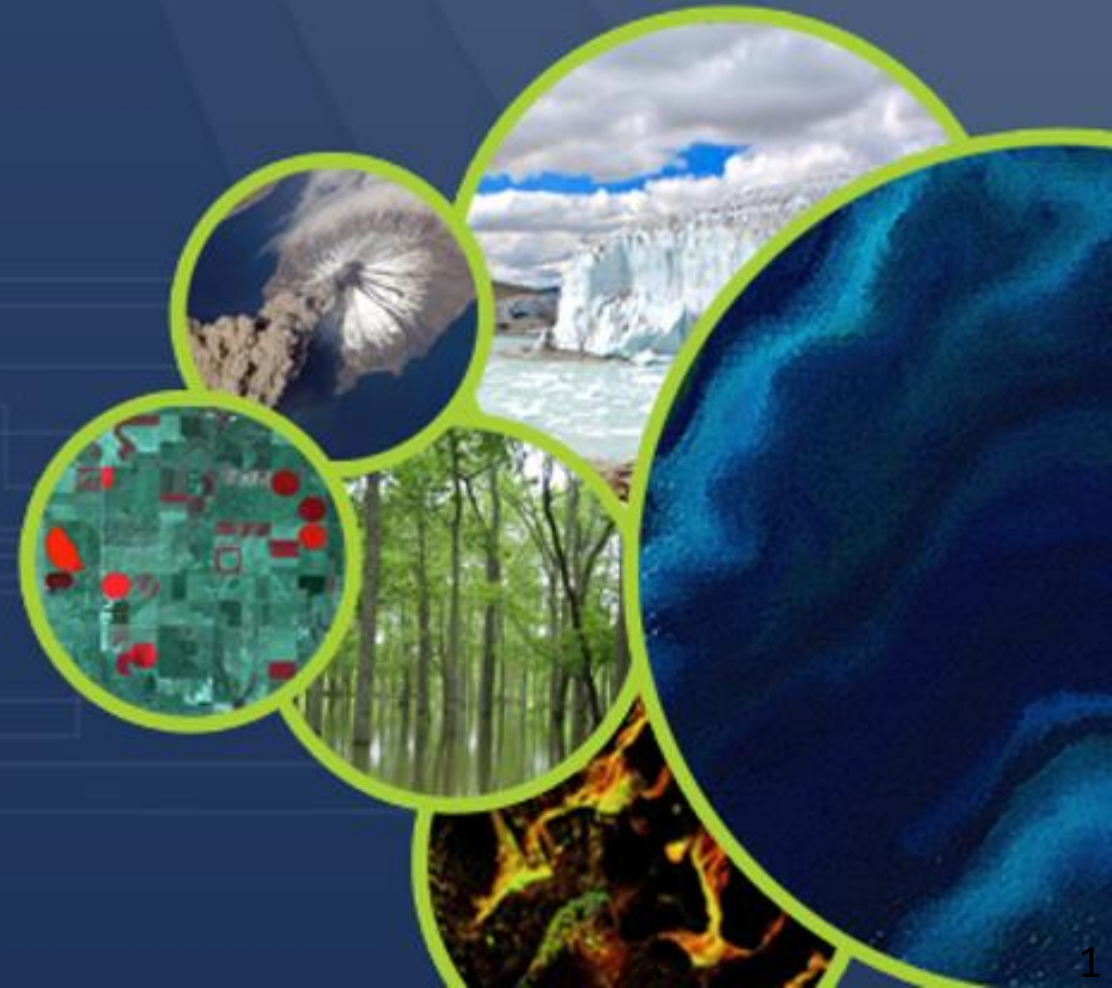
Committee on Earth Observation Satellites

Working Group on Information Systems and Services

CEOS Common Terminology

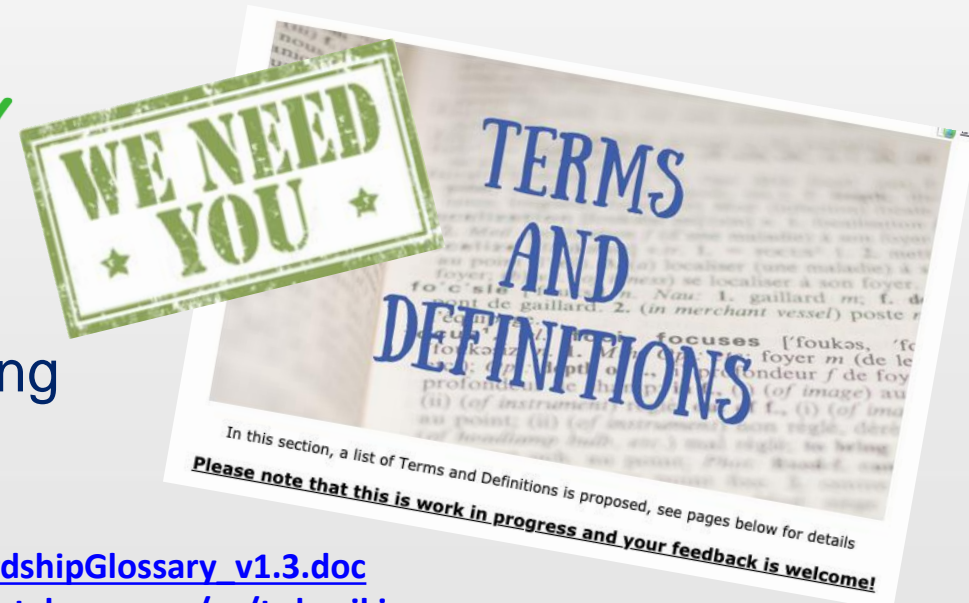
CEOS Common Terminology Group
CEOS WGISS #52
Virtual Meeting

19 - 21 October 2021





- Multi-disciplinary collaboration across Earth Observation and geoscience domains becomes more frequent and requires a common understanding of terms and definitions
- Collaboration initiated between CEOS WGCV, IVOS, and WGISS to “*advance the idea of a CEOS common online dictionary, with a view to eventually reaching out to launch a broader community effort (...)*” (WGCV Action Item 49-06, June 2021)
- Status and way forward
 - CEOS Common Terminology group established ✓
 - Workplan drafted ✓
 - Merging WGISS Data Stewardship Glossary into CEOS WGCV ‘Terms and Definitions’ Wiki - ongoing
 - Reach out to promote initiative - ongoing
 - Discuss target infrastructure - upcoming





Vision

- To establish a consolidated online source for EO/geospatial terminology to be used as the unique reference

Rationale

- With the advent of 'Big Data', Earth Observation, Geospatial Sciences and many of their fields of application become increasingly intertwined, i.e. they become a single 'domain of knowledge'
- Traditions and legacy usage make their vocabularies increasingly complex and confusing as soon as previous 'communities' are crossed.
- Multidisciplinary working groups need to agree on terminology when starting their work, often struggling with diverging practices and then starting own tailored versions (often as "least common denominator")



- Initial contacts and discussions with OGC technical committee, ISO TC211, FAIR dataset quality information WG, CEOS WGCV between December 2020 and June 2021
- Conclusions
 - a consolidation of geospatial/EO terminology seems largely welcome and considered necessary
 - rules, procedures, and tools/platform could and should be put in place first
- CEOS WGCV Action Item 49-06
 - “Peter Strobl to work with IVOS and WGISS to advance the idea of a CEOS common online dictionary, with a view to eventually reaching out to launch a broader community effort (e.g., based on the ‘Geolexica’).”



Existing glossaries define similar terms in a different way

➤ Example: “**Land Cover**” (or “landcover”)

▪ **ISO:**

- observed (bio)physical cover on the Earth’s surface (TC211)

how, by whom, from
where?

What if there is no
'cover'?

Which surface (solid, liquid,
internal)?

▪ **OGC:**

- not available

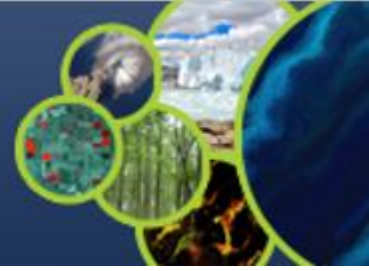
▪ **INSPIRE:**

- Physical and biological cover of the earth's surface including artificial surfaces, agricultural areas, forests, (semi-)natural areas, wetlands, water bodies.

▪ **NASA:**

- The characteristics of a land surface as determined by its spectral signature (the unique way in which a given type of land cover reflects and absorbs light).

- Fully online with fixed URL (DOI), and dedicated URLs for each entry
- Endorsed by all major stakeholders -> 'One Glossary'
- Open to 'public' contributions (registered users -> 'Wikipedia' or 'Git' style)
- Monitoring and moderation by multi-agency group of experts
- Mechanisms for resolving intra- and inter-disciplinary disputes
- Versioning (like in 'Git')
- Compulsory use in all standards (i.e. no in-document conflicting definitions)
- Compulsory listing of all standards using a term





■ Current Composition

Peter Strobl, EC-JRC

Damiano Guerrucci, ESA

Emma Woolliams, NPL

Nigel Fox, NPL

Steve Labahn, USGS

Matthew Steventon, Symbios

Katrin Molch, DLR



■ Status of Activities

- Workplan drafted (done)
- Merging WGISS Data Stewardship Glossary into CEOS WGCV 'Terms and Definitions' Wiki (ongoing)
- Reach out to promote initiative (ongoing)
- Discuss target infrastructure (upcoming)

[EO-DataStewardshipGlossary_v1.3.doc](#)
http://calvalportal.ceos.org/ca/t-d_wiki



For any questions please contact
WGCV – Peter.Strobl@ec.europa.eu
LSI-VC - labahn@usgs.gov
WGISS - Katrin.Molch@dlr.de

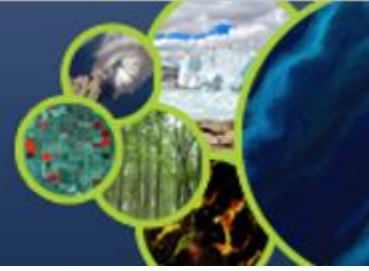
TERMS AND DEFINITIONS

In this section, a list of Terms and Definitions is proposed, see pages below for details
Please note that this is work in progress and your feedback is welcome!

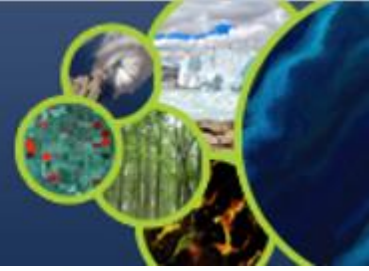


Additional Material





- ISO/TC 211 terminology management group: <https://isotc211.geolexica.org/>
- OGC: <https://www.ogc.org/ogc/glossary/>, <http://www.opengis.net/def/glossary/>
- INSPIRE glossary: <https://inspire.ec.europa.eu/glossary>
- CEOS: http://ceos.org/document_management/Working_Groups/WGISS/Interest_Groups/Data_Stewardship/White_Papers/EO-DataStewardshipGlossary_v1.2.pdf
- NASA: <https://earthobservatory.nasa.gov/glossary>
 - Of these only the 'Geolexica' is interlinked and addressable (per term)!
 - None shows structure or ontology
 - All have gaps and inconsistencies!



- Each term needs to be individually addressable
- Each term needs to be uniquely defined, incl. unified spelling
- Each definition needs to be complete, i.e. building only on everyday language or other defined terms
- All terms used in a definition which are defined themselves need to be marked and linked (parent-relations)
- All related terms where a term is (re-)used need to be listed and linked (sibling and child relations)
- Circular relations (child becomes parent) shall be avoided
- Categorisations need to be unambiguous (no overlaps) and wherever possible complete (no 'grey zones')