



Committee on Earth Observation Satellites

# CEOS Virtual Data Repositories for WGISS Data Assets

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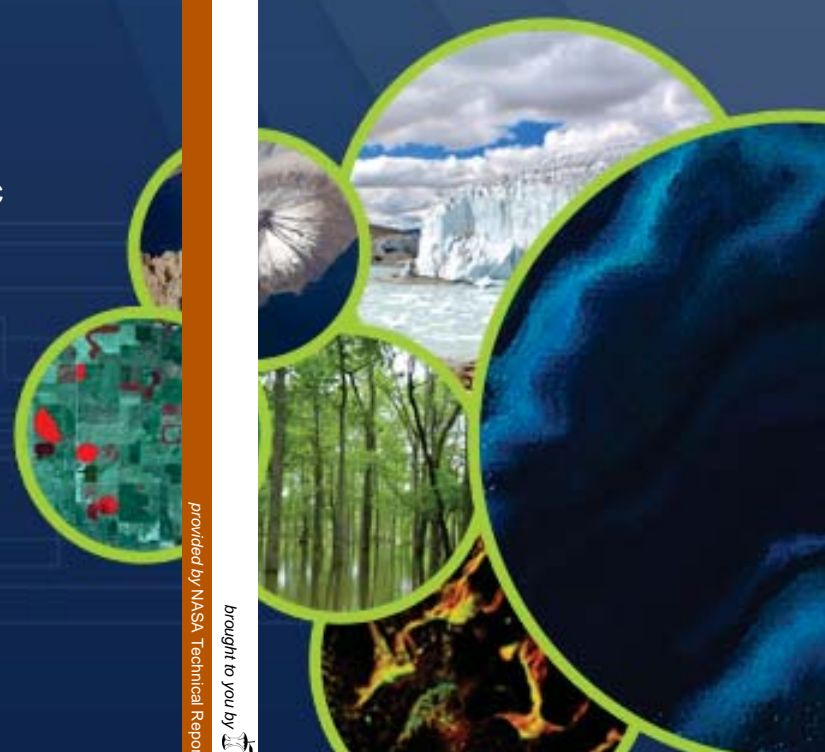
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- **The Committee on Earth Observation Satellites (CEOS) has been serving as a focal point for international coordination of space-related Earth Observation (EO) activities since 1984.**
- **CEOS seeks to optimize benefits through cooperation of members in mission planning and in development of compatible data products, formats, services, applications, and policies.**
- **As the “space arm” of the intergovernmental Group on Earth Observations, CEOS is implementing high priority actions to support delivery of societal benefit.**

## Mission

CEOS ensures international coordination of civil space-based Earth observation programs and promotes exchange of data to optimize societal benefit and inform decision making for securing a prosperous and sustainable future for humankind.



# CEOS WGISS Virtual Data Repository



## Working Group on Information Systems and Services.

WGISS promotes collaboration in the development of systems and services that manage and supply Earth observation data as a working group of CEOS.

- WGISS facilitates the discovery, access, preservation and use of CEOS agencies' data.

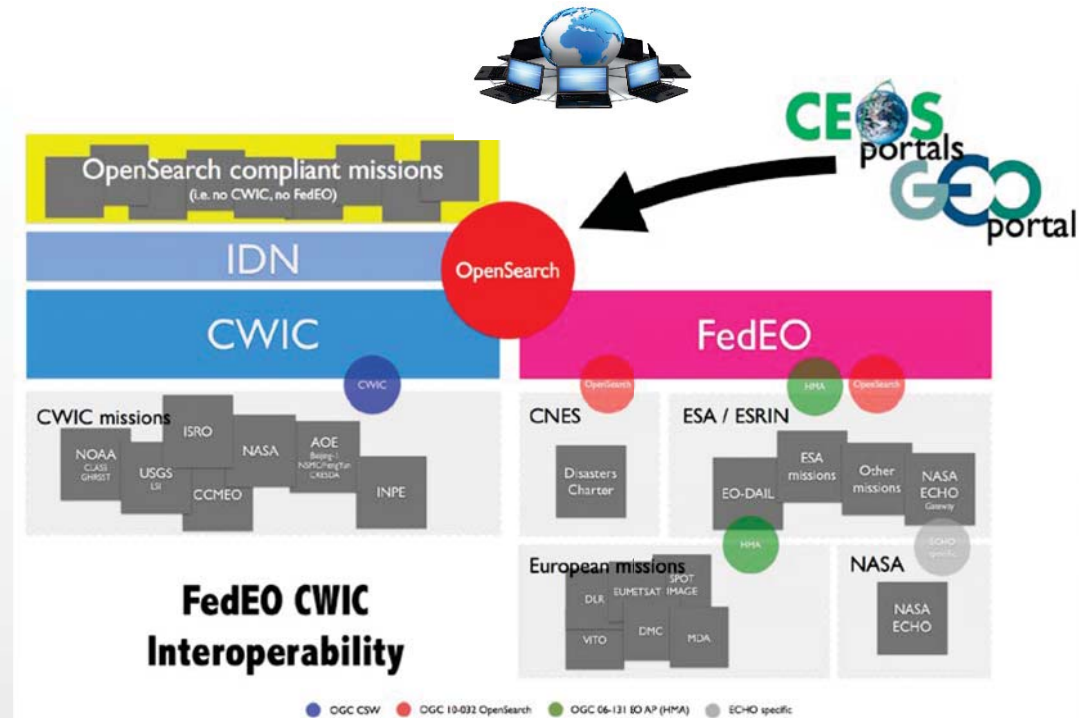
WGISS Connected Data Assets are contributions by CEOS agencies of their data that are aligned by a common framework for discovery, search, and access.

- Agreement on hierarchical view of data: data collections and data granules/products within a data collection.
- Agreement on WGISS supported standards for discovery of data collections with vetted keywords for mission, instrument, and science.
- Agreement on WGISS supported standards for search for data granules.

# WGISS Standards Architecture



- WGISS has adopted the CEOS OpenSearch Best Practices in addition to the Open Geospatial Consortium (OGC) Catalog Services for the Web (CSW) v2.0.2 standards for searching remote sensing catalogs, both for collection and granule/product information.
- The IDN (International Directory Network), CWIC (CEOS WGISS Integrated Catalog), and FedEO (Federated Earth Observation Gateway) systems have implemented the WGISS



5000+ supported standards and missions are providing access to over: granules of EO mission data.

- The IDN provides descriptions of data sets (collection level) of relevance to global change research. Both the CWIC and the FedEO systems offer search of inventory data (granule level) and access to the data records. A WGISS system level team will provide technical support to register data collections in the IDN and to on-board new data providers to connect their inventory systems to CWIC or FedEO or as an independent data source.



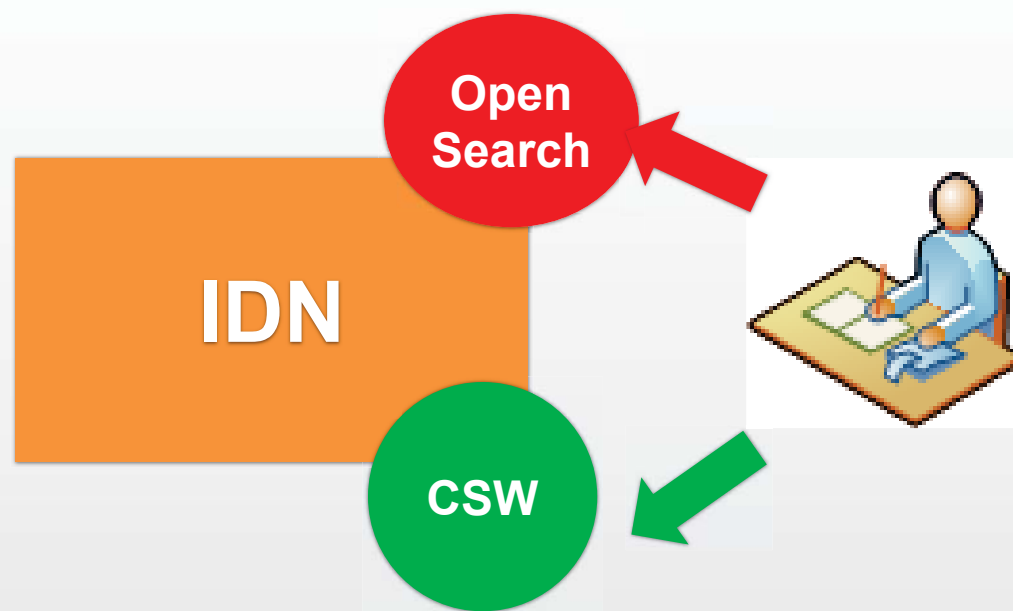
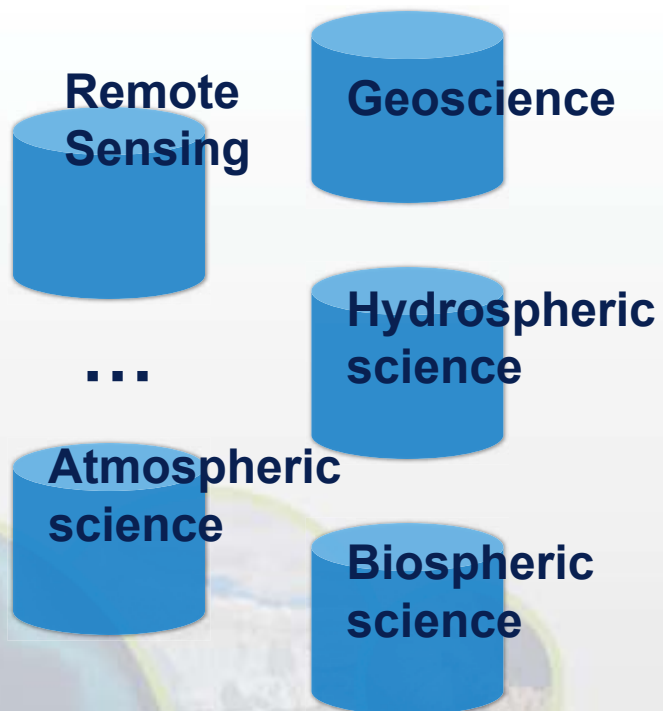
## Each CEOS agency data partner will support

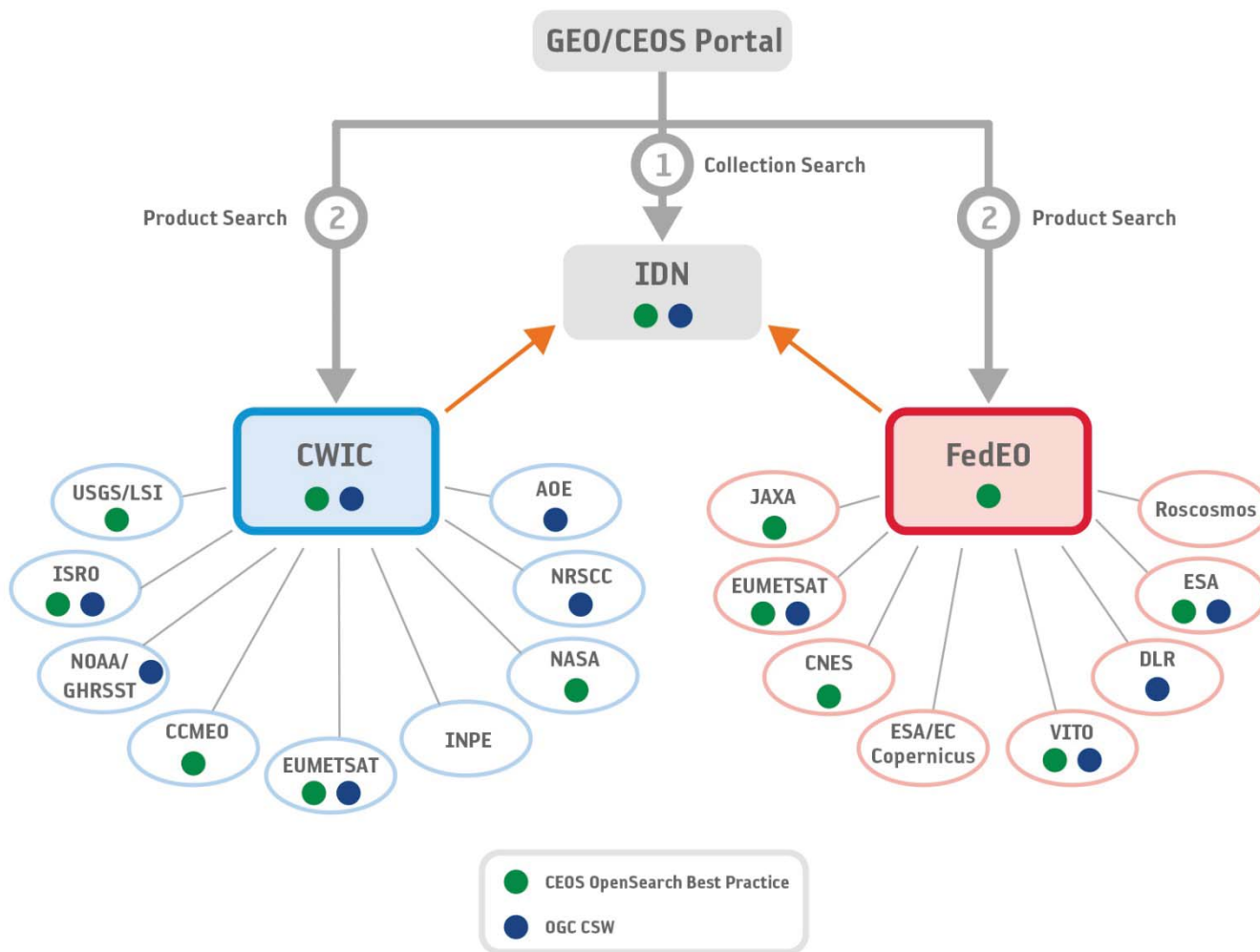
- Data collection registration at the IDN using the GCMD (Global Change Master Directory) keywords for mission, instrument, science; Info about how granule search is supported will be included in the data collection registration
- 1 of the 2 supported WGISS standards
  - CEOS OpenSearch Best Practices (v 1.2)
  - OGC CSW 2.0.2
- A data access path for each searchable data granule/product
  - Data download
  - Data order (free or with cost)
  - Email order (free or with cost)
- A technical POC that works with the System Level Team

Accepting additional data partners!

- **Clients can offer search and access to all the satellite data available through the WGISS Framework of Connected Data Assets**
- **Clients can offer search and access to a limited subset of data available through the WGISS Framework of Connected Data Assets along with other services**
- **Clients can offer support for a 2-step search**
  - **Discovery through collection search using platform, instrument, science keywords, etc. (IDN). The IDN data record will contain info about how granule search is supported**
  - **Search granule metadata at data partners via CWIC, FedEO, Independent servers**
- **All granule search results will contain links to data access**

## IDN metadata







- **WGISS System Level team provides technical support for client and tool developers**
- **WGISS Client Partner Guide – new document being written by the System Level Team; Details how to discover and search for collection and granule data at IDN, CWIC, and FedEO.**
  - **How to search for CEOS data collections/granules**
  - **How to search for CWIC data; FedEO data;**
  - **How to search for GEOSS tagged collections**
  - **Example search request and search response messages**

# Do you develop software tools for the distribution and analysis of environmental data?

CEOS WGISS can help you include data collected from the vantage point of space!

30,000+ data collections that are discoverable with over 5000+ data collections that are searchable and data downloadable.

Visit <http://wgiss.ceos.org/access> to learn how to start accessing and using our data!

**CEOS** is an international organization enabling partnership and collaboration across governmental agencies that develop and operate earth-observing satellites.

The 60+ CEOS member agencies currently operate 153 satellites that produce data useful for a broad set of applications

The Working Group for Information Systems and Standards (**WGISS**) brings together experts in satellite data management and services to develop common internet-based standards that facilitate discovery, search, and access to data served by the CEOS agencies.



- **Coordinate operations, maintenance and evolution activities (e.g. for infrastructure, standards adoption, etc).**
- **On-board new data partners**
- **Provide technical support for client partners**
- **Monitor the health of the federated system and report outages and errors etc. to the partners**
- **Test all the components of the federated system, including end to end search and data access**
- **Work with data and client partners to identify and resolve system and component bugs**
- **Provide support for metrics collection**

**System Level team is essential for making the WGISS Framework of Connected Data Assets work!**

**[Access-SysTeam-help@wgiss.ceos.org](mailto:Access-SysTeam-help@wgiss.ceos.org)**

- **Evolve the CEOS OpenSearch Best Practices spec**
- **Incorporate data services within the WGISS Connected Data Assets**
- **Discovering and understanding services across agencies**
- **Interoperable and discoverable data services:**
  - **Discover and compare Analysis Ready Data Products**
  - **Discover and compare analytic services**

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