Group on Earth Observations: Overview

presented by
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Implementation of the GGRF in Latin America
International Workshop

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Jet Propulsion Laboratory
California Institute of Technology

GEO GROUP ON EARTH OBSERVATIONS

GEOSS Portal

Who we are · What we do · News & Blog · Get Involved · Library · Events · Get Data Now

GEO at a Glance

The Group on Earth Observations (GEO) is an intergovernmental partnership that improves the availability, access and use of Earth observations for a sustainable planet.

GEO promotes open, coordinated and sustained data sharing and infrastructure for better research, policy making, decisions and action across many disciplines. The GEO community focuses on three global priority engagement areas: the United Nations 2030 Agenda for Sustainable Development, the Paris Agreement, and the Sendai Framework for Disaster Risk Reduction.

What are Earth observations?

Earth observations are data and information collected about our planet, whether atmospheric, oceanic or terrestrial. This includes space-based or remotely-sensed data, as well as ground-based or *in situ* data. Coordinated and open Earth observations enable decision makers around the world to better understand the issues they face, in order to shape more effective policies.

What does GEO offer?

In addition to over 70 Work Programme activities and initiatives that address global needs, coordination and knowledge gaps, the GEO community is building the Global Earth Observation System of Systems (GEOSS) and has already made more than 400 million data and information resources accessible via www.geoportal.org.

http://www.earthobservations.org/geo_wwd.php

GEO Milestones and History

THIRD EARTH OBSERVATION SUMMIT (EOS-III): This summit convened on 16 February 2005 in Brussels, Belgium. In a resolution, delegations from almost 60 countries endorsed the 2005-2015 GEOSS 10-Year Implementation Plan and established the intergovernmental GEO to implement it.

SECOND EARTH OBSERVATION SUMMIT (EOS-II): Convened on 24 April 2004 in Tokyo, Japan, this Summit of 40 governments adopted a Framework Document defining the scope and intent of the Global Earth Observation System of Systems (GEOSS).

FIRST EARTH OBSERVATION SUMMIT (EOS-I): meeting on 31 July 2003 in Washington, DC, US, high-level representatives of 34 governments adopted a declaration establishing the ad hoc intergovernmental Group on Earth Observations (ad hoc GEO), co-chaired by the European Commission, Japan, South Africa and the US to draft a 10-Year Implementation Plan.

WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT (WSSD): Held from 26 August to 4 September 2002 in Johannesburg, South Africa, the WSSD highlighted the need for coordinated observations relating to the state of the Earth.

http://www.earthobservations.org/geo_community.php

Earth Observations for the Benefit of Humankind

The Group on Earth Observations (GEO) is an intergovernmental organization working to improve the availability, access and use of Earth observations for the benefit of society. GEO works to actively improve and coordinate global EO systems and promote broad, open data sharing.

Our Community

GEO's 105 Member Countries and 132 Participating Organizations work together to develop and implement projects and initiatives that solve global problems.

Member Countries / Participating Organizations / Observers / Get involved

Our Activities

Explore the GEO Work Programme to learn about the vast and varied Flagships, Initiatives and Community Activities being implemented by the GEO Community around the world.

GEO Work Programme / GEOSS / Open Data Advocacy

Our Engagement Priorities

GEO's global priorities include supporting the UN 2030 Agenda for Sustainable Development, the Paris Climate Agreement, and the Sendai Framework for Disaster Risk Reduction.

UN 2030 Agenda for Sustainable Development

Earth observations play a major role in achieving the SDGs. GEO is instrumental in integrating Earth observation data into the methodology of measuring and achieving SDG indicators.
Learn more >

The Paris Climate Agreement

GEO makes available Earth observations in support of effective policy responses for climate change adaptation and mitigation, working with partners to enhance global observation systems in order to strengthen resilience and adaptive capacity to climate-related hazards.
Learn more >

The Sendai Framework for Disaster Risk Reduction

Earth observations contribute to disaster preparedness and better mitigation and response. GEO supports disaster resilience by increasing coordination of Earth observations to forecast and prepare for disasters, to reduce damage and to better manage and recover from disasters.
Learn more >

http://www.earthobservations.org/index.php

GROUP ON EARTH OBSERVATIONS

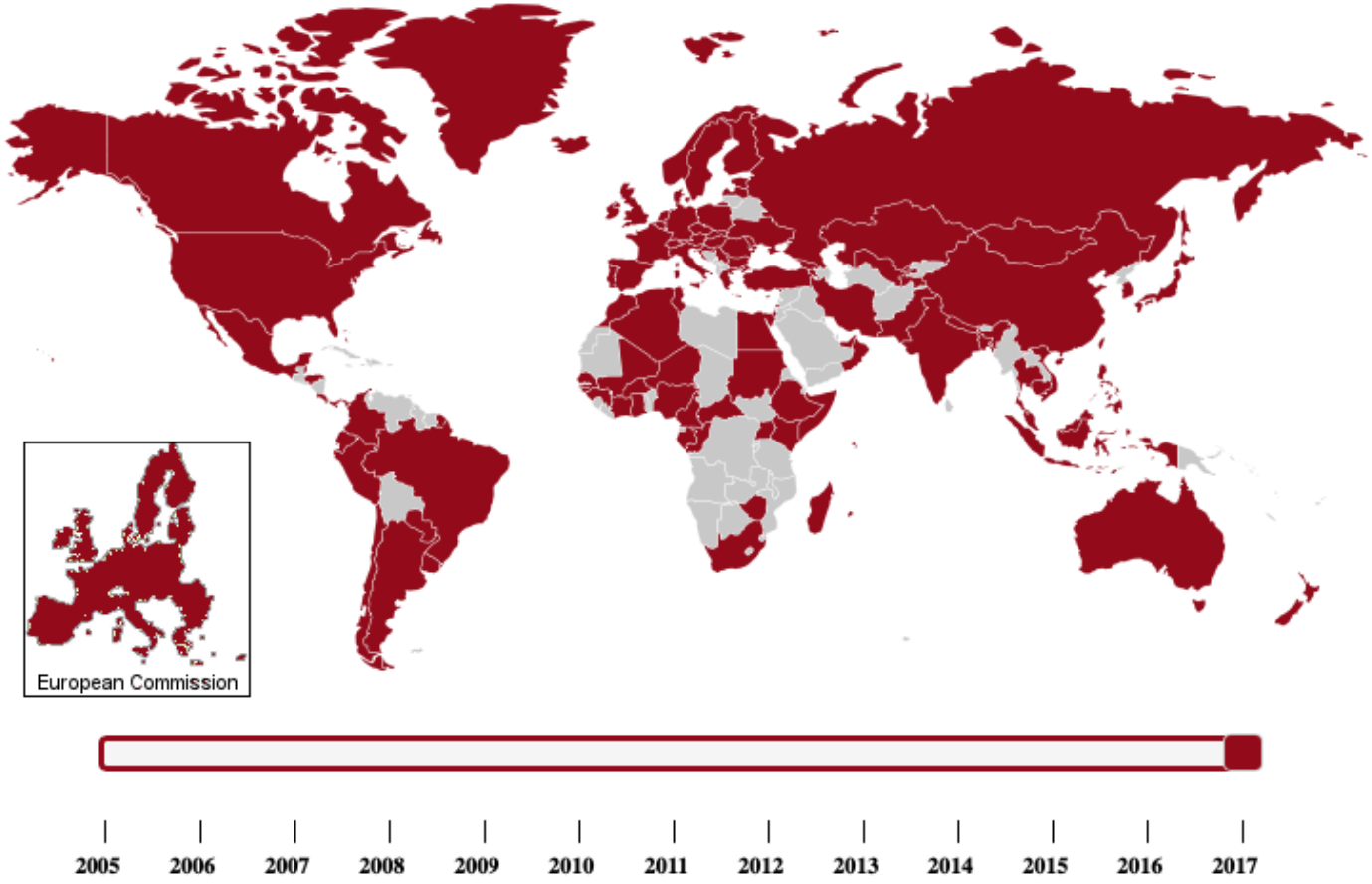
Who we are | What we do | News & Blog | Get Involved | Library | Events | Get Data Now

Member list | Member map | Member charts

Member charts

GEO Member Map for the year 2017

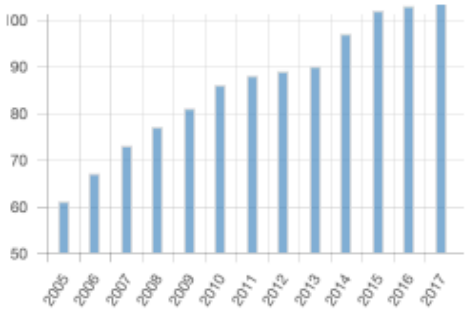
(Use slider under the map to change the year)



Number of Members (2017)

Africa:	27
Americas:	16
Asia/Oceania:	21
C.I.S.:	6
Europe:	35
Total:	105

Number of Members by year



http://www.earthobservations.org/members.php

Participating Organizations: 132

http://www.earthobservations.org/pos.php

GEO Work Programme

The GEO Work Programme is the primary instrument to plan and implement GEO activities. Work Programme development and implementation is a joint effort of the GEO Secretariat and GEO Members countries, Participating Organizations, research institutions and commercial sector contributors

- Download the 2017-2019 GEO Work Programme
- Contribute to the 2020-2022 GEO Work Programme

Explore the 2017-2019 GEO Work Programme

GEO Flagships

GEO Biodiversity Observation Network (GEO BON)	GEO Global Agricultural Monitoring (GEOGLAM)	Global Forest Observation Initiative (GFOI)	Global Observation System for Mercury (GOS4M)

GEO Initiatives

AfriGEOSS: Reinforcing Regional African Engagement	AmeriGEOSS	AquaWatch	Asia-Oceania GEO (AOGEO)	Climate Change Impact Observation On Africa's Coastal Zones (GEO-CCIOoACZ)	Data Access for Risk Management (GEO-DARMA)
Earth Observations for Ecosystem Accounting (EO4EA)	Earth Observations in Service of the 2030 Agenda for Sustainable Development	EuroGEOSS	GEO Carbon and GHG Initiative	GEO Cold Regions Initiative (GEOCRI)	GEO Geohazard Supersites and Natural Laboratories (GSNL)
GEO Global Ecosystem Initiative (GEO ECO)	GEO Global Network for Observation and Information in Mountain Environments (GEO-GNOME)	GEO Global Water Sustainability (GEOGLOWS)	GEO Human Planet Initiative: Spatial Modeling of Impact, Exposure and Access to Resources	GEO Land Degradation Neutrality	GEO Vision for Energy (GEO-VENER)
GEO Wetlands Initiative	GEO-CRADLE	GEOSS-EVOLVE	Global Drought Information System (GDIS)	Global Observation System for Persistent Organic Pollutants (GOS4POPS)	Global Urban Observation and Information
Global Wildfire Information System (GWIS)	Oceans and Society: Blue Planet				

Foundational Tasks

GEOSS Development and GCI Operations			Community Development	Secretariat Operations	
Advancing GEOSS Data Sharing Principles	GCI Operations	GEONETCast	Capacity Building Coordination	Communication and Engagement	Management and Support
GEOSS In-Situ Earth Observation Resources	GEOSS Satellite Earth Observation Resources	User Needs and Gap Analysis		Monitoring and Evaluation	

http://www.earthobservations.org/geoss_wp.php

Community Activities

Access to climate data in GEOSS

Advancing Communication Networks

African Geochemical Baselines

Airnow International: Expanding Networks and Integrating Methods for Air Quality and Health Data

Arctic GEOSS

Chinese Tsunami Mitigation System

Copernicus Atmospheric Monitoring Service (CAMS)

Copernicus Climate Change Service (C3S)

Data Analysis and Integration System (DIAS)

Digital GEOMUSEUM

Earth Observations and Citizen Science

Earth Observations for Cultural Heritage Documentation

Earth Observations for Disaster Risk Management

Earth Observations for Geohazards, Land Degradation and Environmental Monitoring

Earth Observations for Health (EO4HEALTH)

Earth Observations for Managing Mineral Resources

Earth Observations for the Water-Energy-Food (W-E-F) Nexus

Earth2Observe

Forest Biodiversity in Asia and the Pacific Region: Capacity Building Phase

Geodata for Agriculture and Water (G4AW)

GFCS - GEO Collaboration

Global Agricultural Drought Monitoring

Global Ecosystems and Environment Observation Analysis Report Cooperation (GEOARC)

Global Flood Awareness System (GLOFAS)

Global Flood Risk Monitoring

Global Mangrove Monitoring

Global Marine Ecosystem Monitoring (GMEM)

Global Wheat Pest and Disease Habitat Monitoring and Risk Forecasting

Harmful Algal Bloom (HAB) Early Warning System

Himalayan GEOSS

In-Situ Observations and Practices for the Water Cycle

Integrated City-Region Systems Modelling: resilience.io

Land Cover and Land Cover Change

Research Data Science Summer Schools

Socio-Economic Benefits of Earth Observations

Space and Security

Synergized Multi-Source Remote Sensing Products and Services

TIGGE (Thorpex Interactive Grand Global Ensemble) evolution into a Global Interactive Forecast System (GIFS)

http://www.earthobservations.org/geoss_wp.php

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http://www.earthobservations.org/geoss_wp.php

OVERVIEW

The AmeriGEOSS initiative is a framework that seeks to promote collaboration and coordination among the GEO members in the American continent, "to realize a future wherein decisions and actions, for the benefit of the region, are informed by coordinated, comprehensive and sustained Earth observations and information". The proposed initiative focuses its efforts in the four Societal Benefit Areas (SBA's) selected and prioritized by the Americas Caucus country-members, which are:

1. Agriculture, associated with climate variability, climate change, and food security.
2. Disaster risk reduction, particularly for data exchange associated with early warnings and for the generation of regional products of early warnings.
3. Water, associated with the management approach of water resources and data management.
4. Biodiversity and Ecosystem Monitoring including biodiversity observation in coastal, marine, and continental habitats, in the context of capacity building for better monitoring, management, and maintenance of ecosystems and biodiversity they support; also to predict future changes.

Point of contact: Angelica Gutierrez, NOAA, angelica.gutierrez@noaa.gov

Approach

Some GEO flagships are already addressing the AmeriGEOSS priority areas. The first approach will be to engage with the GEO flagships and their end user communities that are from member countries in the region. From there, the initiative seeks to strengthen the engagement of other Americas countries, and to work with the flagships to tailor their work to address regional needs. Regional needs will be brought to the initiative through the management coordination groups of AmeriGEOSS. In particular, unaddressed needs from developing countries will be prioritized. In each case, the decision-making processes being addressed in the flagships will be tailored to meet the needs of the decision-makers in each of the Americas nations.

Capacity Building In AmeriGEOSS

- Linked to the AmeriGEOSS priority Areas : Water, Disaster, Agriculture, and Ecosystem/Biodiversity
- Leverages resources from established Capacity Building activities (e.g., GeonetCast/Vlab, NASA-ARSET, GEOGLAM, etc)
- Leverages resources from GEO-CIEHLYC members for outreach and instruction (workshops and monthly webinars)
- AmeriGEOSS week, training/courses are provided in parallel for the priority areas.

https://www.amerigeoss.org/about/overview

There are currently 16 Americas Caucus Member countries:

Argentina

Bahamas

Belize

Brazil

Canada

Chile

Colombia

Costa Rica

Ecuador

Honduras

Mexico

Panama

Paraguay

Peru

United States

Uruguay

- Participating organizations include Sistema e la Integracion Centroamerica's Central American Commission on Environment and Development (CCAD), CATHALAC, **CEOS**, others

https://www.amerigeoss.org/about/members

AmeriGEO

Search Datasets

DATA HUB | DATASETS | ORGANIZATIONS | GROUPS | ABOUT

The DataHub provides discovery, access and usability of data, tools, services and resources for analysis, understanding and decision-making.

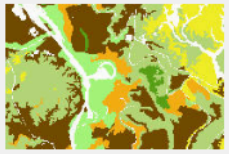
For technical assistance please email amerigeoss@gmail.com @AmeriGEOSS

SEARCH DATA

Use keyword searches to find and quickly display content, e.g., water or agua

446.7k	42	49
DATASETS	ORGANIZATIONS	GROUPS

FEATURED MAPS, TOOLS, AND APPLICATIONS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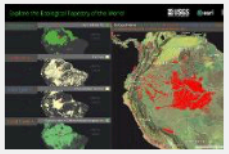
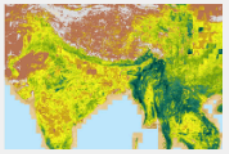

EcoExplorer

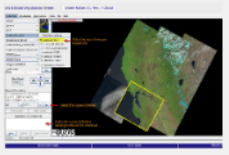
Global Agriculture Disaster A...


Sentinel-2 Imagery: NDVI C...

World Soils Harmonized Worl...

World Soils Harmonized Worl...


Exploring Arctic Elevation


Global Visualization Viewer (...

https://data.amerigeoss.org

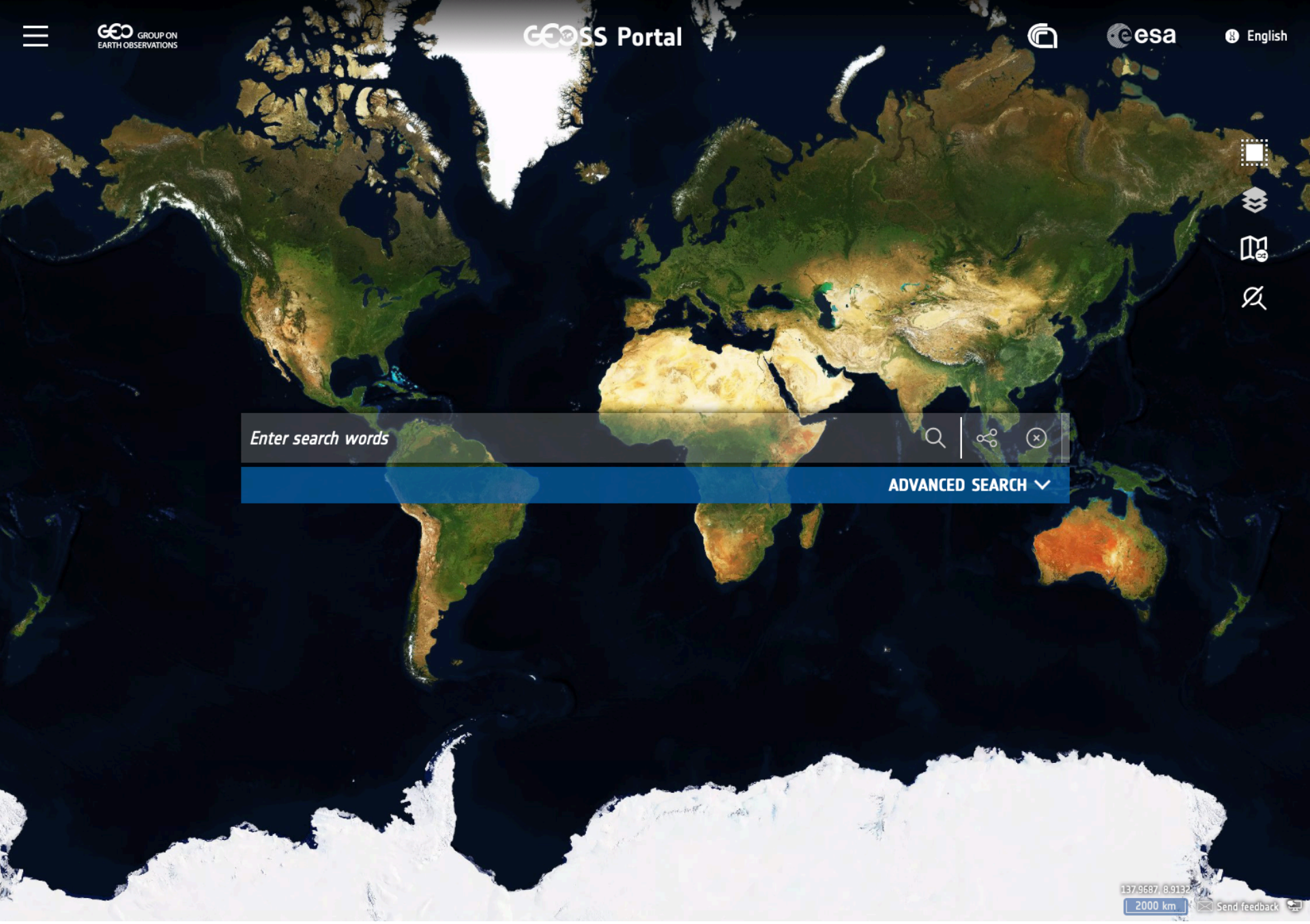
About GEOSS

A central part of GEO's Mission is to build the Global Earth Observation System of Systems (GEOSS). GEOSS is a set of coordinated, independent Earth observation, information and processing systems that interact and provide access to diverse information for a broad range of users in both public and private sectors. GEOSS links these systems to strengthen the monitoring of the state of the Earth. It facilitates the sharing of environmental data and information collected from the large array of observing systems contributed by countries and organizations within GEO. Further, GEOSS ensures that these data are accessible, of identified quality and provenance, and interoperable to support the development of tools and the delivery of information services. Thus, GEOSS increases our understanding of Earth processes and enhances predictive capabilities that underpin sound decision-making: it provides access to data, information and knowledge to a wide variety of users.

This 'system of systems', through its GEOSS Platform (former GCI), proactively links together existing and planned observing systems around the world and support the need for the development of new systems where gaps currently exist. It will promote common technical standards so that data from the thousands of different instruments can be combined into coherent data sets.

The 'GEOSS Portal' offers a single Internet access point for users seeking data, imagery and analytical software packages relevant to all parts of the globe. It connects users to existing data bases and portals and provides reliable, up-to-date and user friendly information – vital for the work of decision makers, planners and emergency managers.

http://www.earthobservations.org/geoss.php



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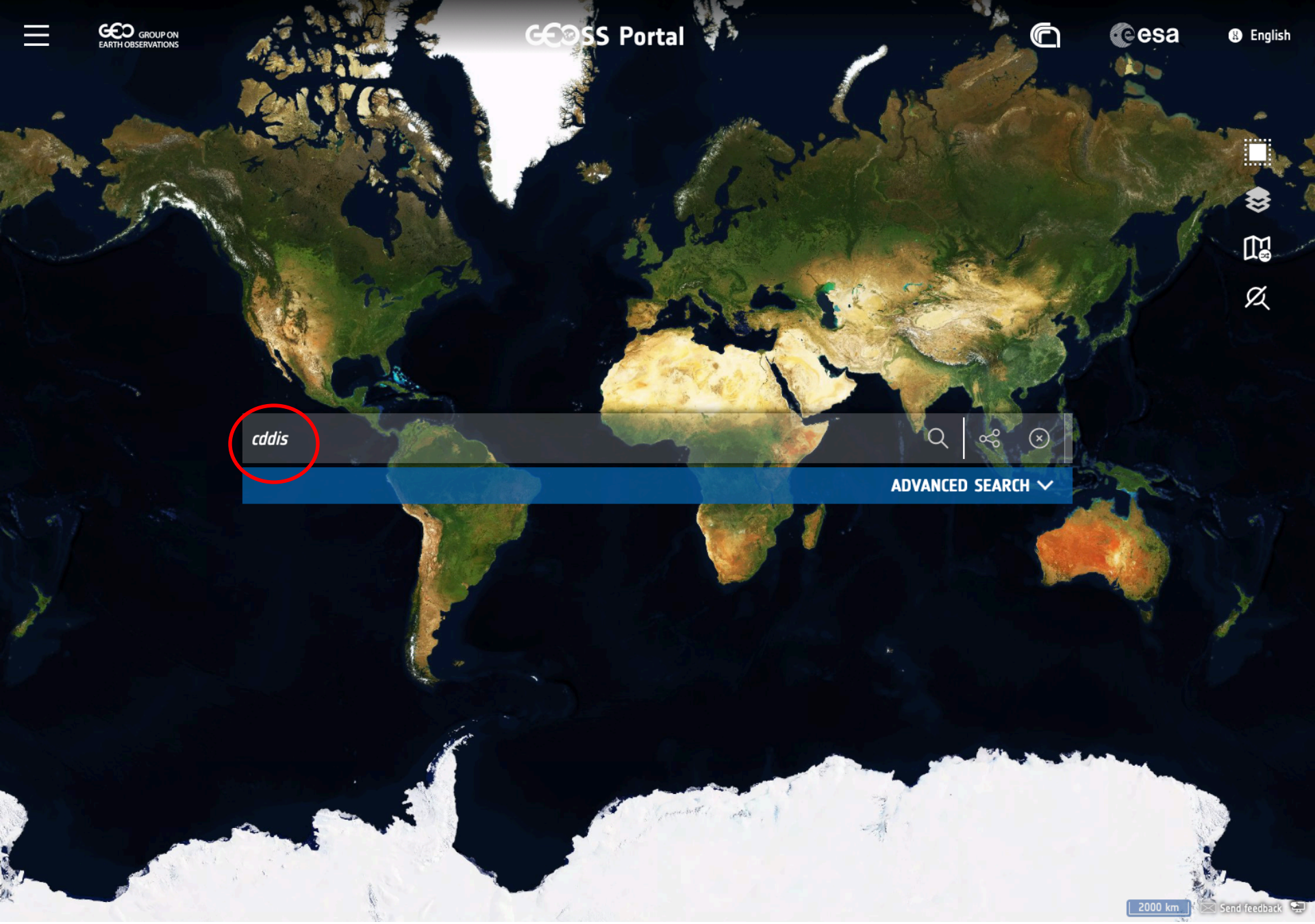

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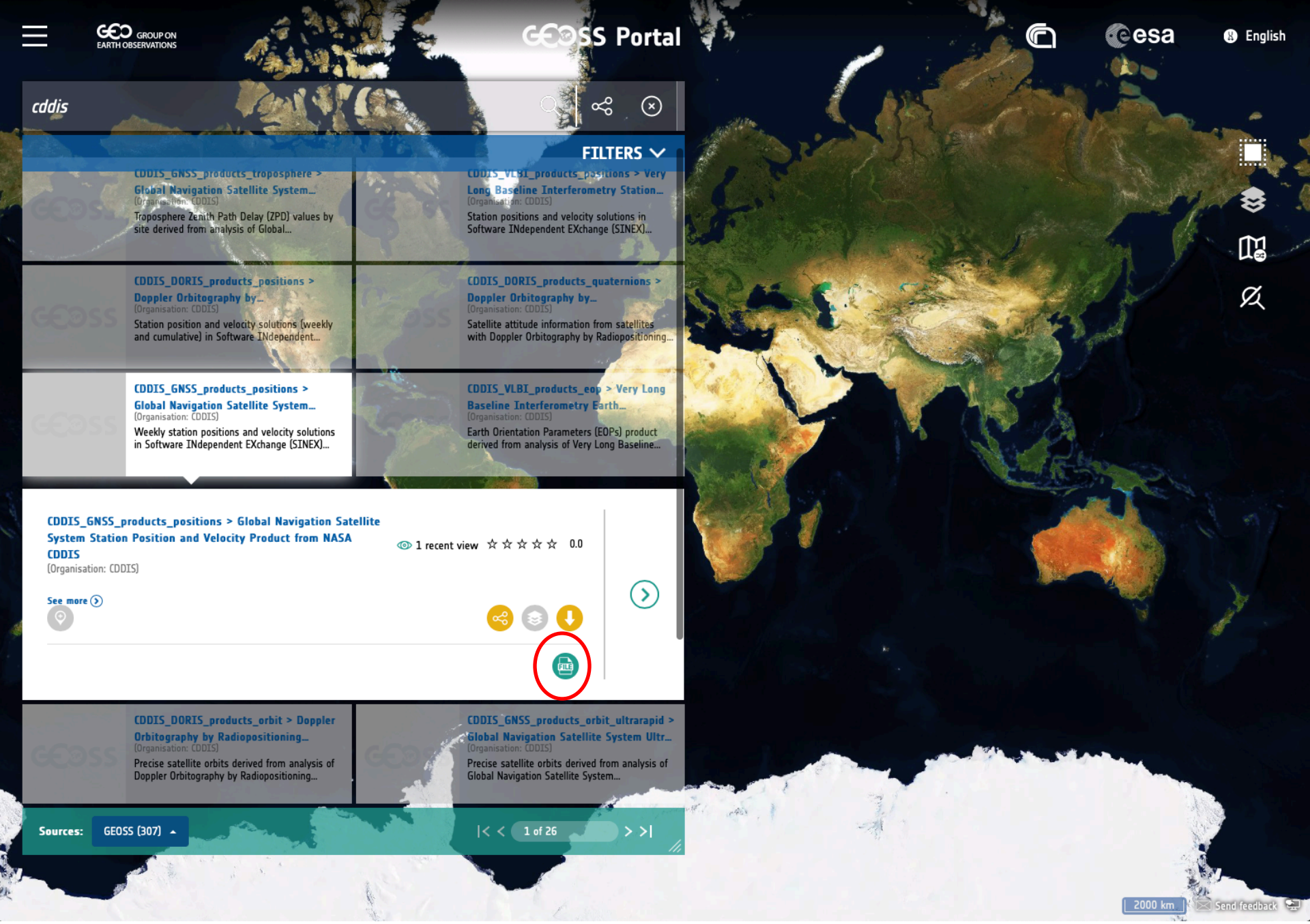

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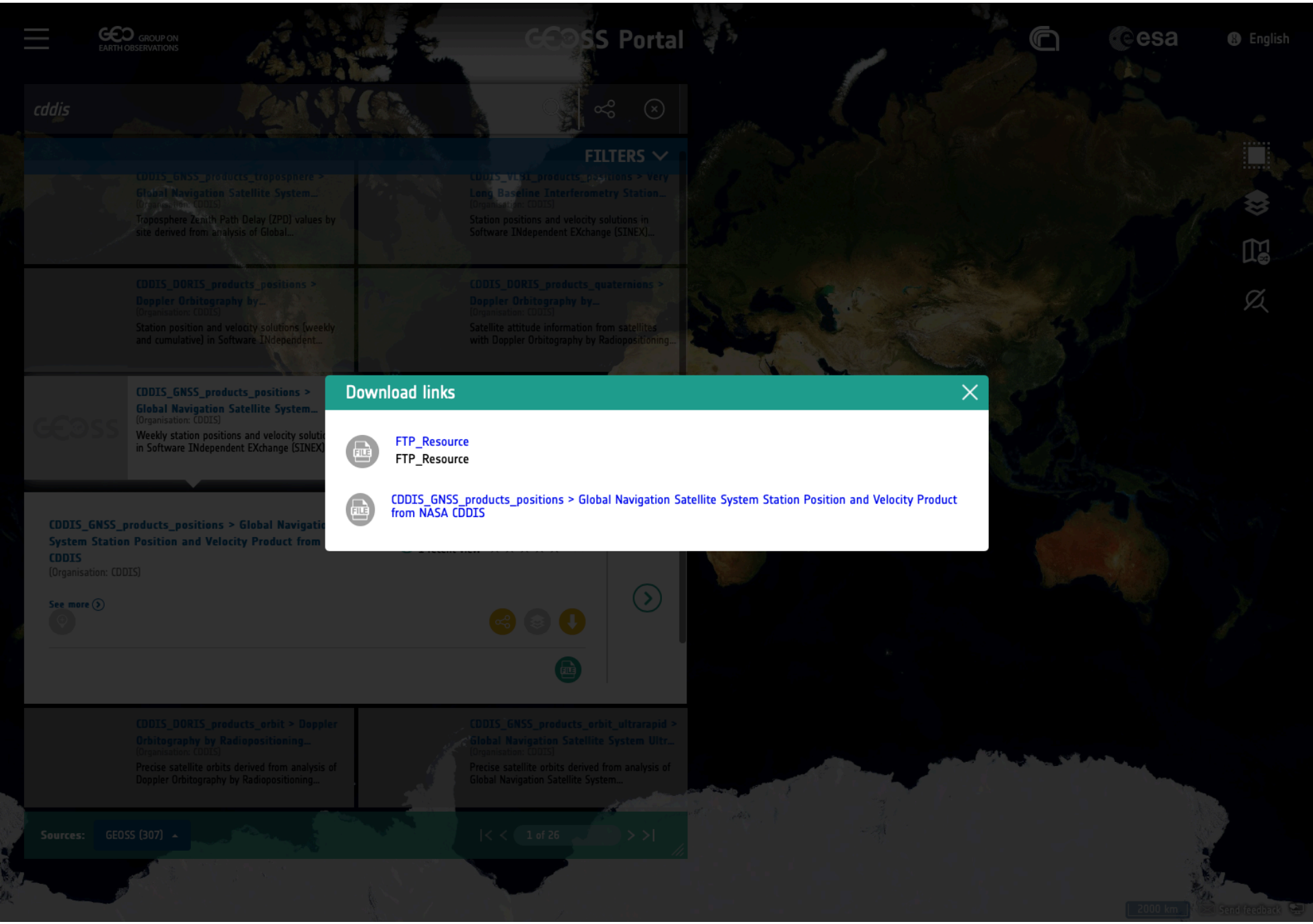

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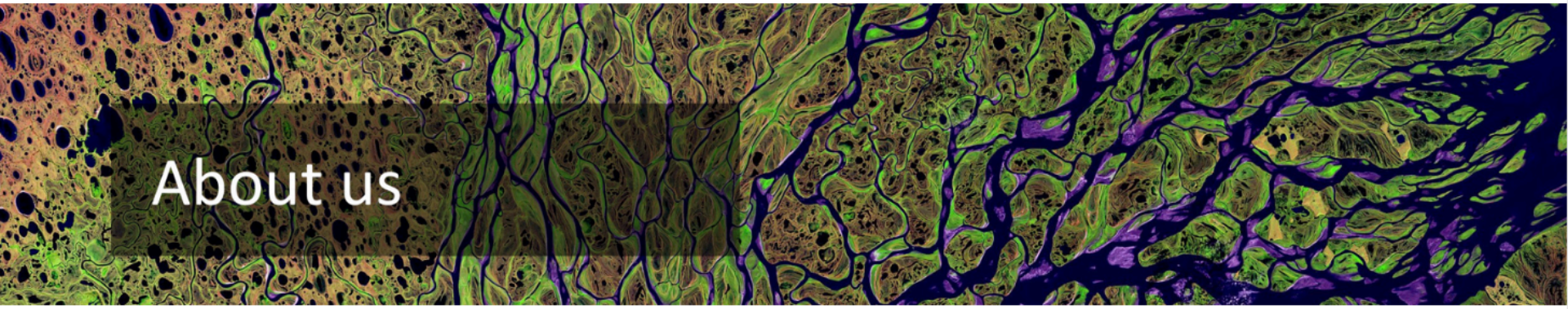

GEO Community

GEO is a partnership of more than 100 national governments and in excess of 100 Participating Organizations that envisions a future where decisions and actions for the benefit of humankind are informed by coordinated, comprehensive and sustained Earth observations.

GEO is a unique global network connecting government institutions, academic and research institutions, data providers, businesses, engineers, scientists and experts to create innovative solutions to global challenges at a time of exponential data growth, human development and climate change that transcend national and disciplinary boundaries. The unprecedented global collaboration of experts helps identify gaps and reduce duplication in the areas of sustainable development and sound environmental management.

Together, the GEO community is creating a Global Earth Observation System of Systems (GEOSS) to better integrate observing systems and share data by connecting existing infrastructures using common standards. There are more than 400 million open data resources in GEOSS from more than 150 national and regional providers such as NASA and ESA; international organizations such as WMO and the commercial sector such as Digital Globe.

Ministers of the GEO member governments meet periodically to provide the political mandate and overall strategic direction for GEO. The Mexico City Ministerial Declaration from the GEO Ministerial Meeting in 2015 saw world leaders commit to support open Earth observation data for the next decade.

Full and open access to Earth observation data, information and knowledge is crucial for humanity as it faces unprecedented social, economic and environmental challenges.

Mexico City Ministerial Declaration, November 2015

The GEO Plenary is the highest decision-making body of GEO, composed of Principals at the senior-official level of government, or their Alternates, representing GEO Member governments and Participating Organizations. Plenary meetings are held once a year and decisions are taken through consensus.

http://www.earthobservations.org/geo_community.php

شكراً جزيلاً
ngiyabonga
рахмат
danke
謝謝
teşekkür ederim
Баярлалаа
спасибо
faafetai lava
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matondo
paldies
grazzi
mahalo
tapadh leat
kiitos
dankie
nanni
nandri
dhanyavad
mauruuru
thank you
gracias
хвала
asante
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tenki
bedankt
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gracje
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