



The **Group on Earth Observations**

Douglas Cripe, GEO Secretariat

Earth Observations

In, on and around the Earth

What is Earth observation?

Earth observation is the gathering of information about physical, chemical and biological systems in, on and around the Earth.

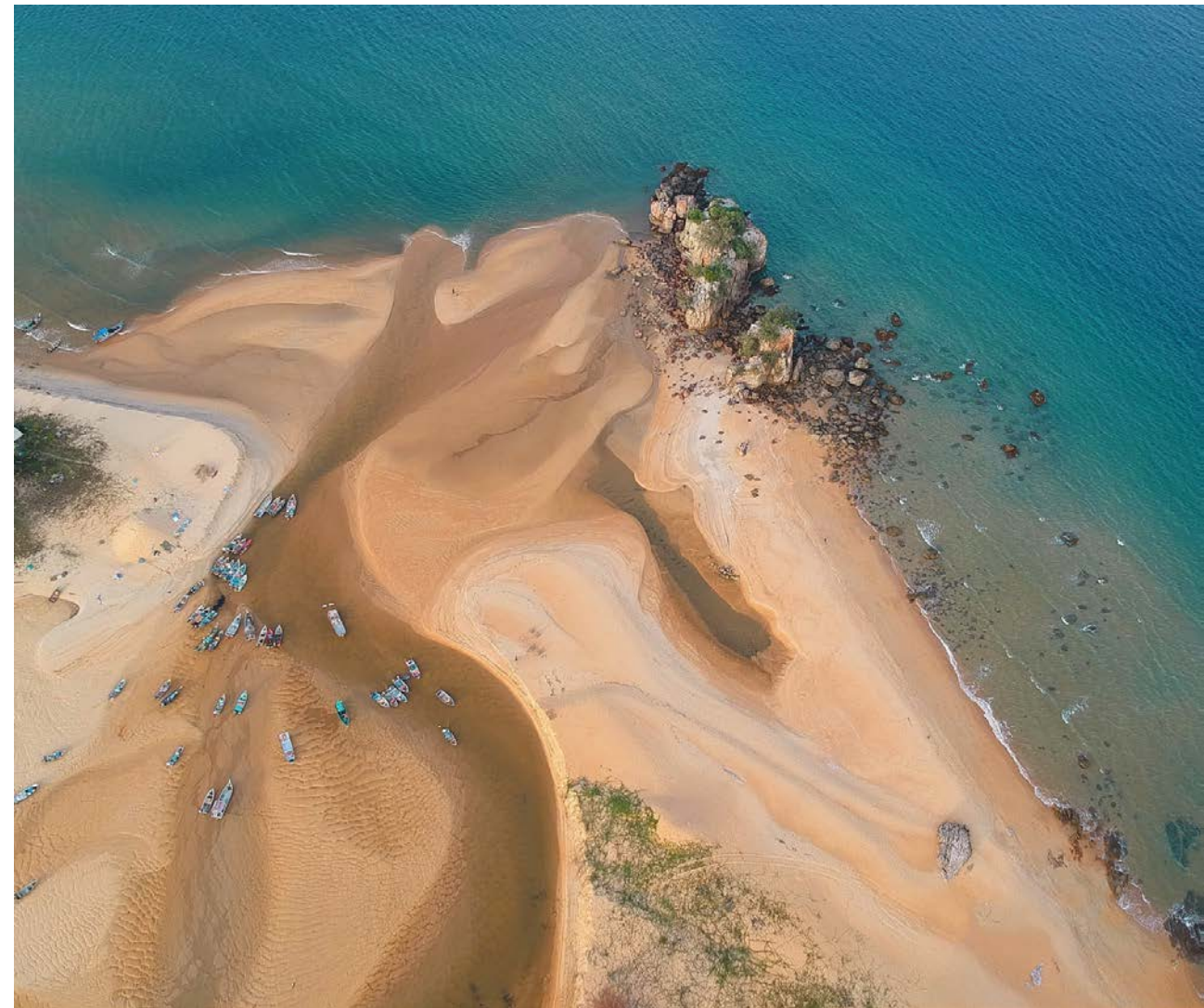


Earth Observations

In, on and around the Earth

What are Earth observations important?

Earth observations are crucial for informed decision making on a myriad of issues that affect human well-being, the environment and the economy.



Group on Earth Observations

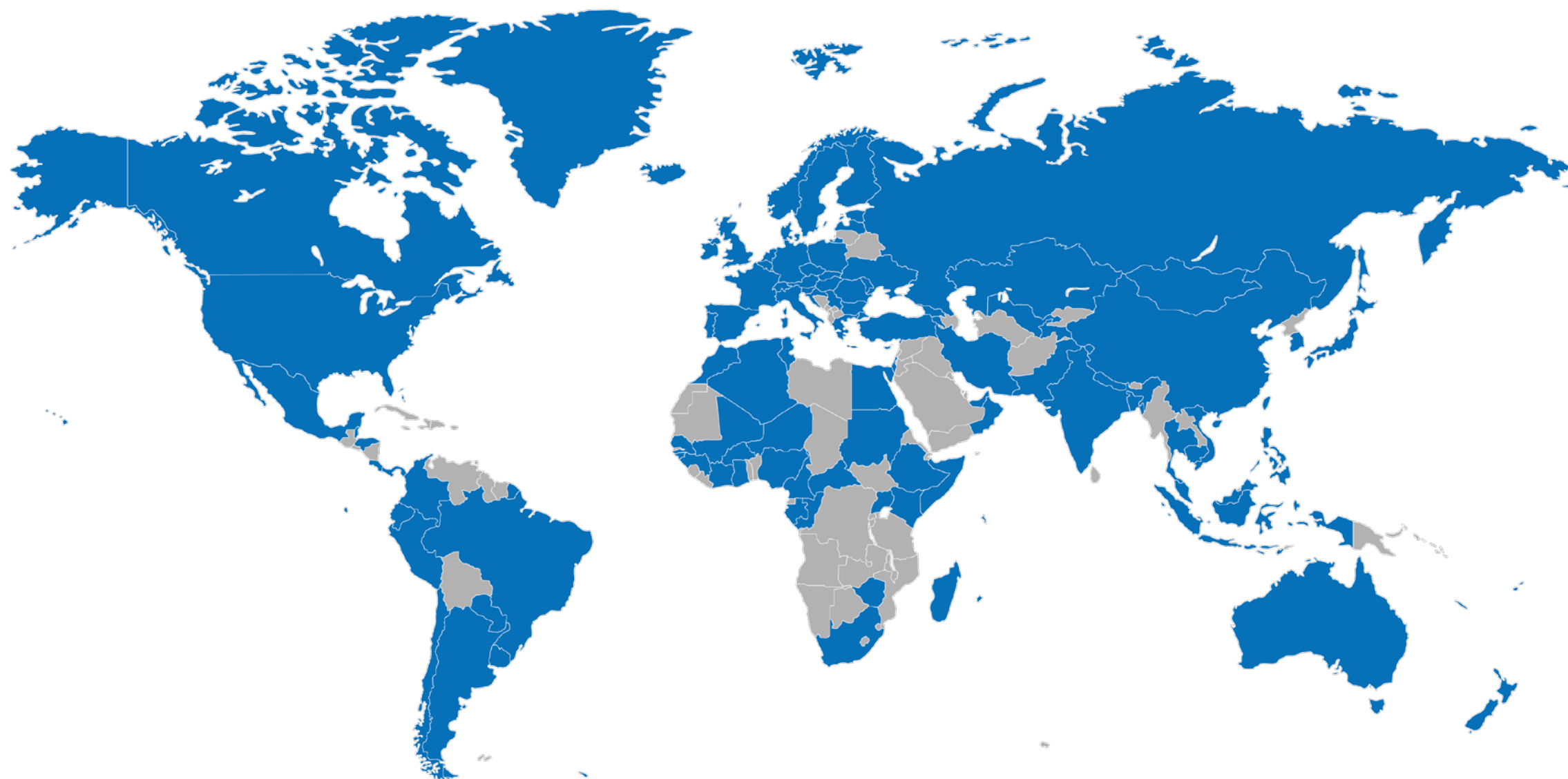
An overview

What is GEO?

GEO is an intergovernmental partnership working to improve the availability, access and use of Earth observations for the benefit of society.



MEMBER COUNTRIES



Africa: **27** - Asia/Oceania - **21**, Europe: **34** - C.I.S: **7** - Americas: **16**

Total: 105

 AARSE	 Africa Climate Change Research Centre	 ACMAD	 adie ASSOCIATION POUR LE DROIT À L'INITIATIVE ÉCONOMIQUE	 adpc	 AFRIGIST	 AFRITERRA The Cartographic Free Library	 AGI ASSOCIATION OF GEOSPATIAL INDUSTRIES
 AGRHYMET	 APN	 ARISTEE	 ASREN Arab States Research and Education Network	 BELMONT FORUM	 Biodiversity International	 Bioscience Resource Project	 CARIMAC
 Convention on Biological Diversity	 Creative Commons	 CEDARE	 CEOS	 CGMS	 Conservation International	 COSMOS	 COSPAR
 CODATA	 COSPAR	 COSPAR	 CRC-SI	 CRTEAN	 ESDMS CLIMATE DATA MANAGEMENT SYSTEM	 EARSC European Association of Remote Sensing Companies	 EARSeL
 EARTH MIND	 ECLRC	 ECMWF	 EEA	 ETS	 ENVIRONMENTAL PULSE INSTITUTE	 EPoS EUROPEAN PLANETARY SCIENCE TEAM	 ESA
 ESIP	 ESSI	 EUROPEAN UNION SATELLITE CENTRE SatCen Analysts for decision making	 EUMETNET EUROPEAN METEOROLOGICAL DATA NETWORK	 EUMETSAT	 EUREC AGENCY European Renewable Energy Research Centre Agency	 Eurisys ACTING COLLECTIVELY TO BRIDGE SPACE AND SOCIETY	 EuroGeographics
 EuroGeoSurveys The Geological Surveys of Europe	 Food and Agriculture Organization of the United Nations	 FLOWS Great Lakes Outflow System	 Future Earth research for global sustainability	 GBIF	 GCOS GLOBAL CLIMATE OBSERVING SYSTEM	 Géant	 GEM
 GFP global food partnership	 THE GLOBE PROGRAM	 GLOS Great Lakes Outflow System	 GODAN Global Open Data for Agriculture & Nutrition	 GOOS Global Ocean Observing System	 GRSS Global Remote Sensing Society	 GSDI Global Spatial Data Infrastructure Association	 GTOS
 HOT Humanitarian OpenStreetMap Team	 IBEC INTERBALKAN ENVIRONMENT CENTER	 IAF INTERNATIONAL ASSOCIATION OF AERONAUTICAL FEDERATIONS	 IAG International Association of Geodesy	 ICA International Council for Aerial Navigation	 ICIMOD	 ICOS INTERNATIONAL CARBON OBSERVATION SYSTEM	 ICSU International Council for Science
 IEEE	 IHE DELFT	 International Hydrographic Organization Organisation Hydrographique Internationale	 IIASA	 IISD International Institute for Sustainable Development	 International Institute of Space Law	 ILTER International Long-Term Ecological Research Network	 INCOSE International Council on Systems Engineering
 IWM International Water Management Institute	 IBGINS International Board of Geographical Information Sciences	 LMI	 MARPOL MARINE POLLUTION PREVENTION FOR THE ENVIRONMENTAL PROTECTION	 MRI Mountain Research Initiative	 marine technology SOCIETY Opportunity runs design	 OGC Making location count.	 OSS
 PAUL G. ALLEN PHILANTHROPIES	 pogo	 Radiant Earth Earth Imagery for Impact	 RCMRD	 RDA RESEARCH DATA ALLIANCE	 RESOURCES		

A SHARED VISION

TO REALIZE A FUTURE WHERE
DECISIONS AND ACTIONS,
FOR THE BENEFIT OF HUMANKIND,
ARE INFORMED BY
COORDINATED, COMPREHENSIVE AND SUSTAINED EARTH
OBSERVATION INFORMATION AND SERVICES.

GEO IN NUMBERS

7 continents



8 societal benefit areas



12 years



73 work programme activities

105 member governments



126 participating organizations



5,000 data providers



400,000,000
Earth observations



Data Sharing

Open Data for the Benefit of Humankind

Why does open data matter?

Societal benefits arising from Earth observations can only be fully achieved through the open sharing of data, information, knowledge, products and services.



Data Sharing

Open Data for the Benefit of Humankind

How do countries benefit from open data?

There are many diverse benefits and opportunities from providing open data for unrestricted use worldwide.

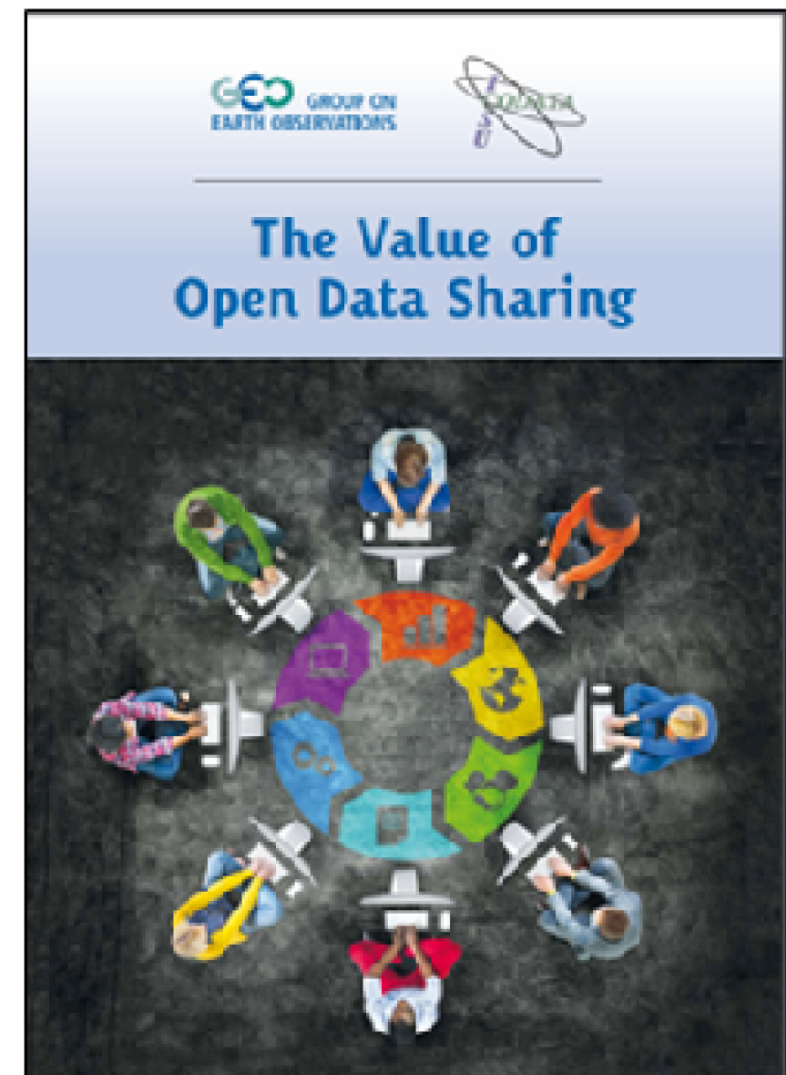
ECONOMY

EDUCATION

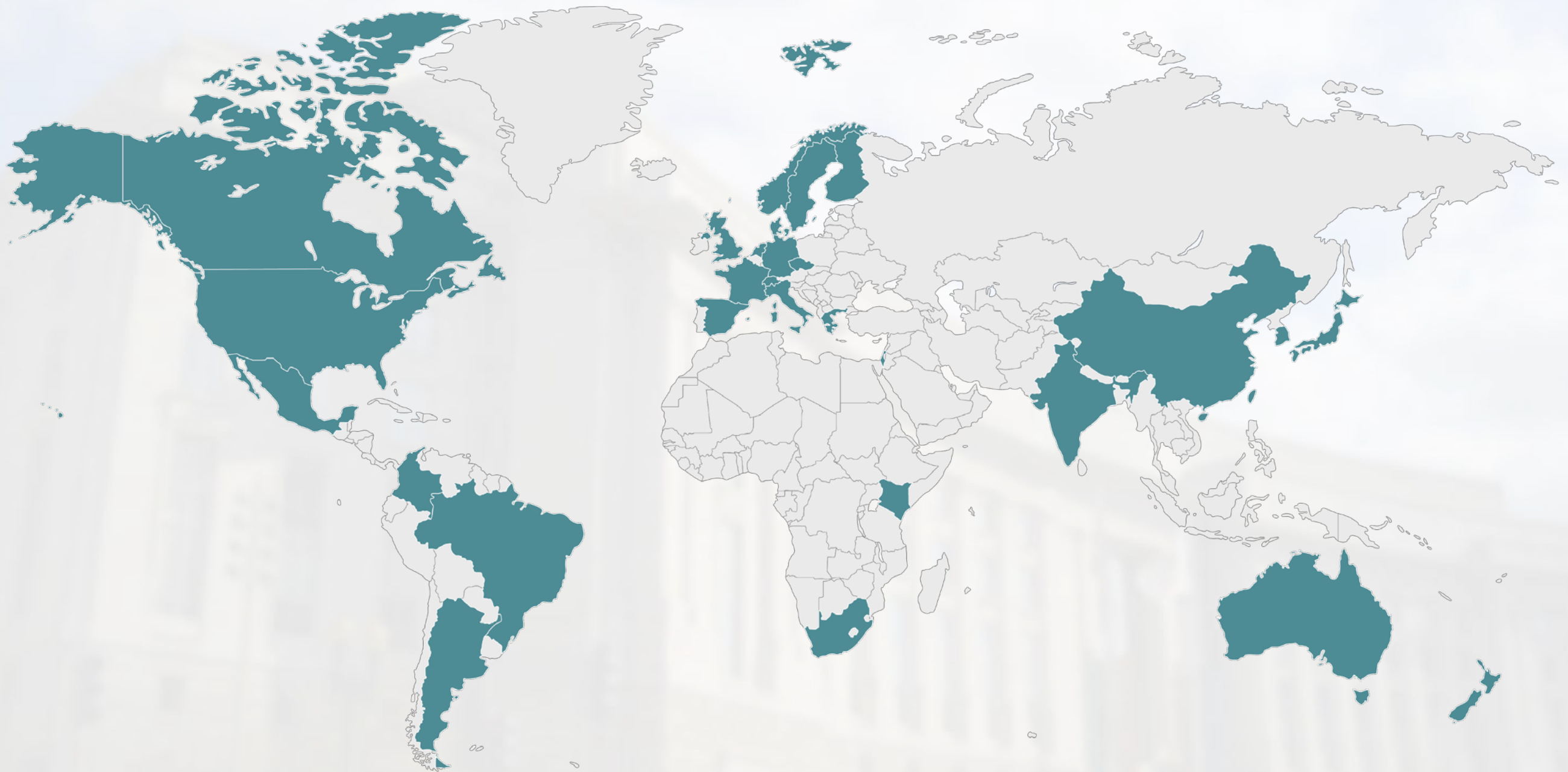
GOVERNANCE

RESEARCH & INNOVATION

SOCIETY



COUNTRIES WITH OPEN EARTH OBSERVATIONS DATA POLICIES OR OPEN DATA PORTALS INCLUDING EARTH OBSERVATIONS



Group on Earth Observations

An overview

What does GEO do?

GEO's 105 Member governments and 126 Participating Organizations work together to develop and implement Earth observation programmes and initiatives that solve global environmental problems.



Group on Earth Observations

An overview

What does GEO have to offer?

In addition to 73 Work Programme activities, the GEO community is creating a Global Earth Observation System of Systems (GEOSS), and has already made over 400 million data and information resources available via

www.geoportal.org



Group on Earth Observations

Our priorities

What are GEO's priorities?

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



GEO & the SDGs

Priority Engagement Area

Earth observations play a major role in achieving the SDGs.



Earth observations are used for monitoring goals, targets, and indicators, tracking progress and helping Member States and custodial agencies make decisions and ongoing adjustments.

GEO is instrumental in integrating Earth observation data into the methodology of measuring and achieving the SDGs.

GEO & Disaster Risk Reduction

Priority Engagement Area

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.



UN World Conference on
Disaster Risk Reduction
2015 Sendai Japan

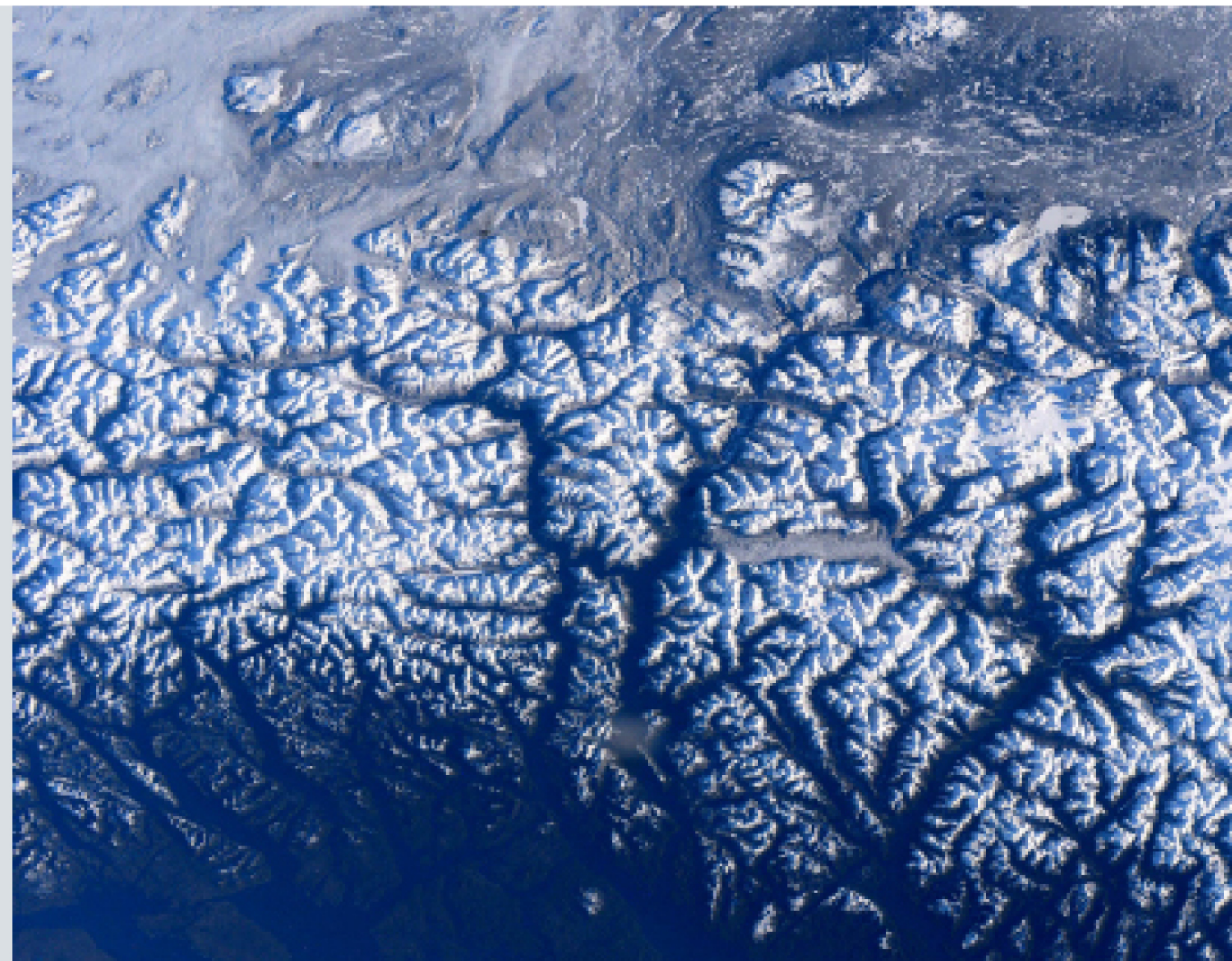


GEO & Climate Change

Priority Engagement Area

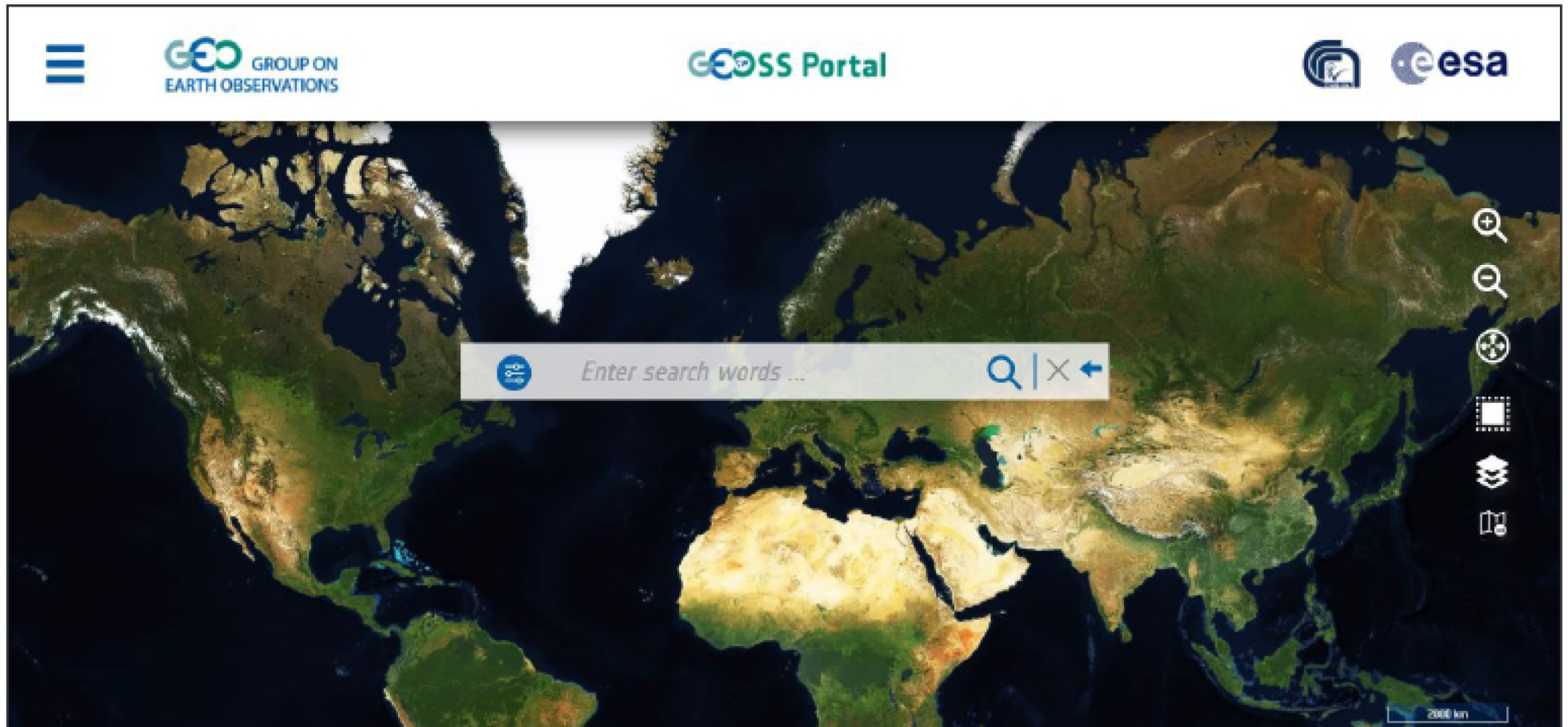
Climate change and its impacts cut across all areas of GEO's work.

GEO makes available Earth observations in support of effective policy making 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.



GEOSS

Global Earth Observation System of Systems



www.geoportal.org

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35 languages

5000+ contributing organizations

200,000 keywords

400,000,000
open EO data resources



@GEOSEC2025
www.earthobservations.org



VISION FOR GEOSS

- From Metatdata to Knowledge hub.
- Targeted, project-driven approach.
- Open source for developing world.

FAIR Principles

Make your data:

- **F**indable
- **A**ccessible
- **I**nteroperable
- **R**eusable

Findable

- Descriptive metadata
- Persistent Identifiers

Accessible

- Determining what to share
- Participant consent and risk management
- Access status

Interoperable

- XML standards
- Data Documentation Initiative
- CDISC

Reusable

- Rights and licence models
- Permitted and non-permitted use

<http://datafairport.org/>



Investing in GEO

Global Earth information for local solutions

FOCUS ON: DIGITAL EARTH AUSTRALIA

Australia's DataCube is an analytical engine that has organized over 30 years of open Landsat data across the entire Australian continent into a tool for delivering information products of use to decision makers.

Without broad open data, the first two DataCube information products would have cost Australia an estimated **500 million USD**.



Thank You

Communicate and Collaborate with GEO:

