

# Evolution of Geological Mapping Agencies: from Identifying Problems to Finding Solutions



**Francesco Pizzocolo (TNO – GSEU)**  
**Julie Hollins (EGS)**

**Rotterdam (NL) – May 4, 2023**

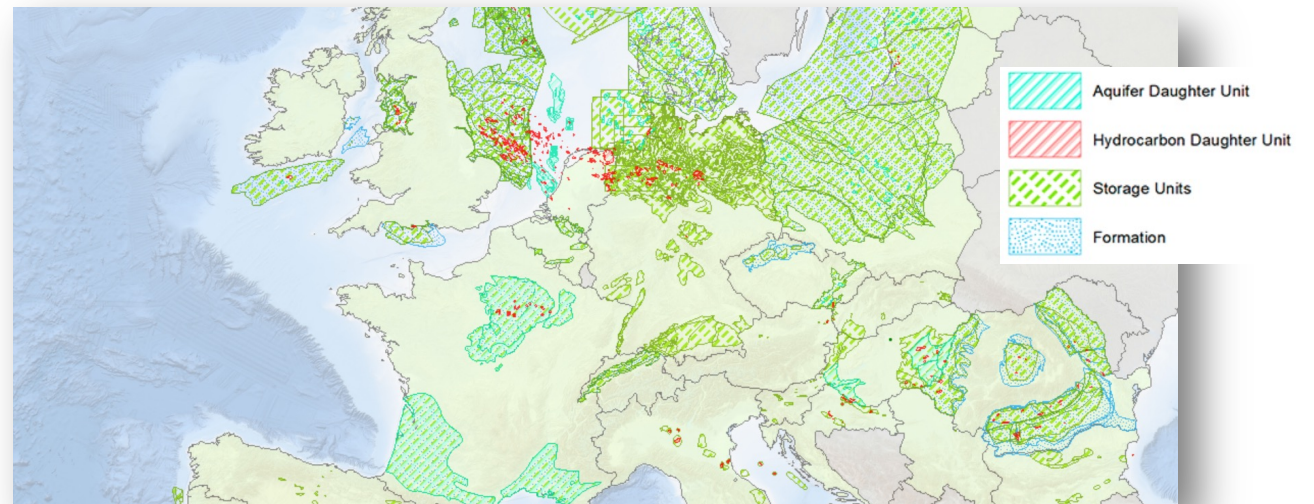
# Geological Mapping Agencies

Geological mapping agencies are organizations that specialize in the collection, analysis, and interpretation of geological data to create maps and models.

They provide information about the geology of a region, including the distribution, composition, and structure of rocks, minerals, and other geological features.

These informations are used for a wide range of purposes and by a broad set of stakeholders.

-  Earth Observation - Geohazards
-  GeoEnergy
-  GeoHeritage
-  GeoChemistry
-  Geological Mapping and Modelling
-  Marine Geology
-  Mineral Resources
-  Spatial Information
-  Urban Geology
-  Water Resources
-  International Cooperation and Development Task Force



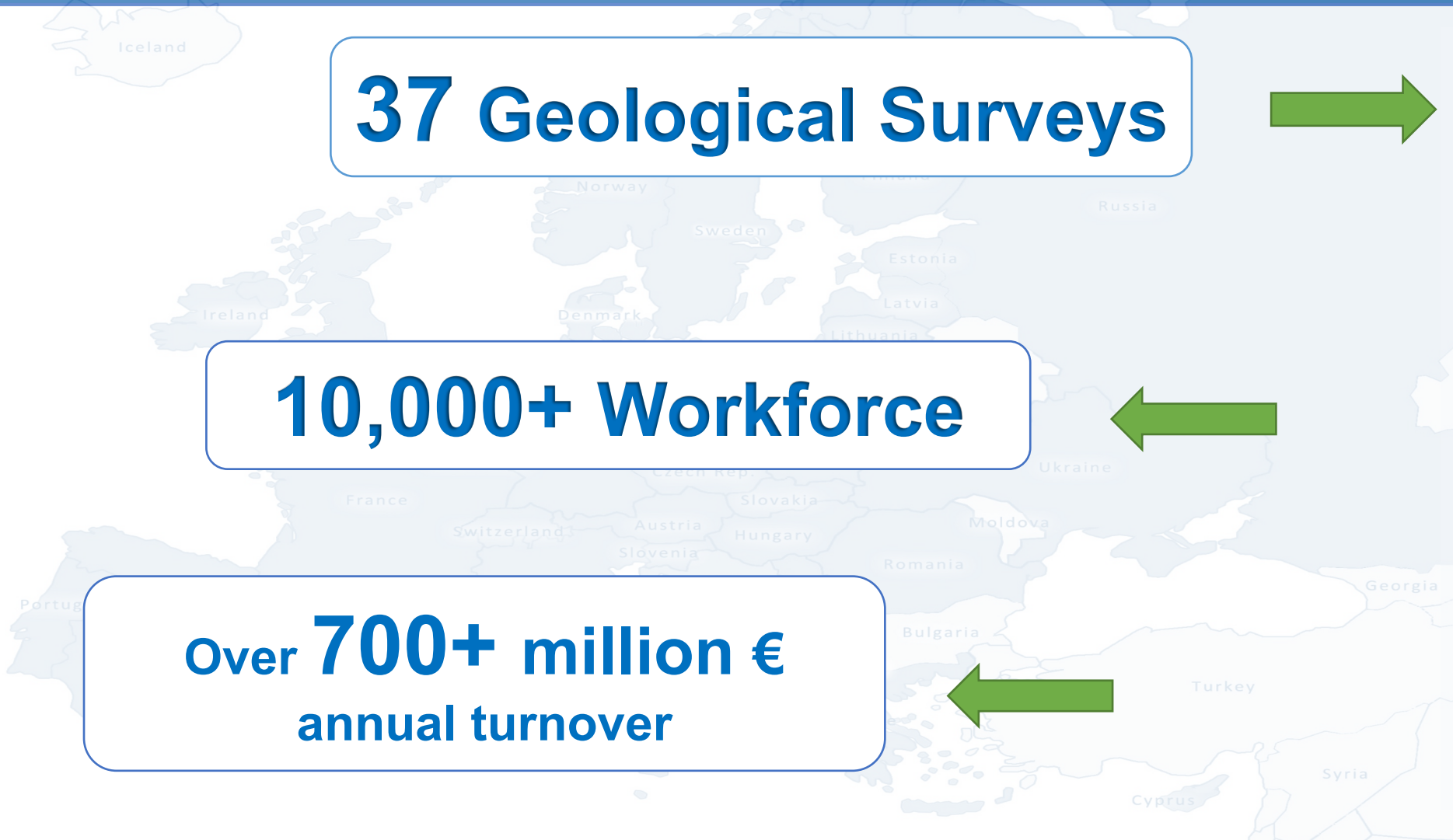
CO<sub>2</sub> Storage Potential

# EuroGeoSurveys

**37 Geological Surveys**

**10,000+ Workforce**

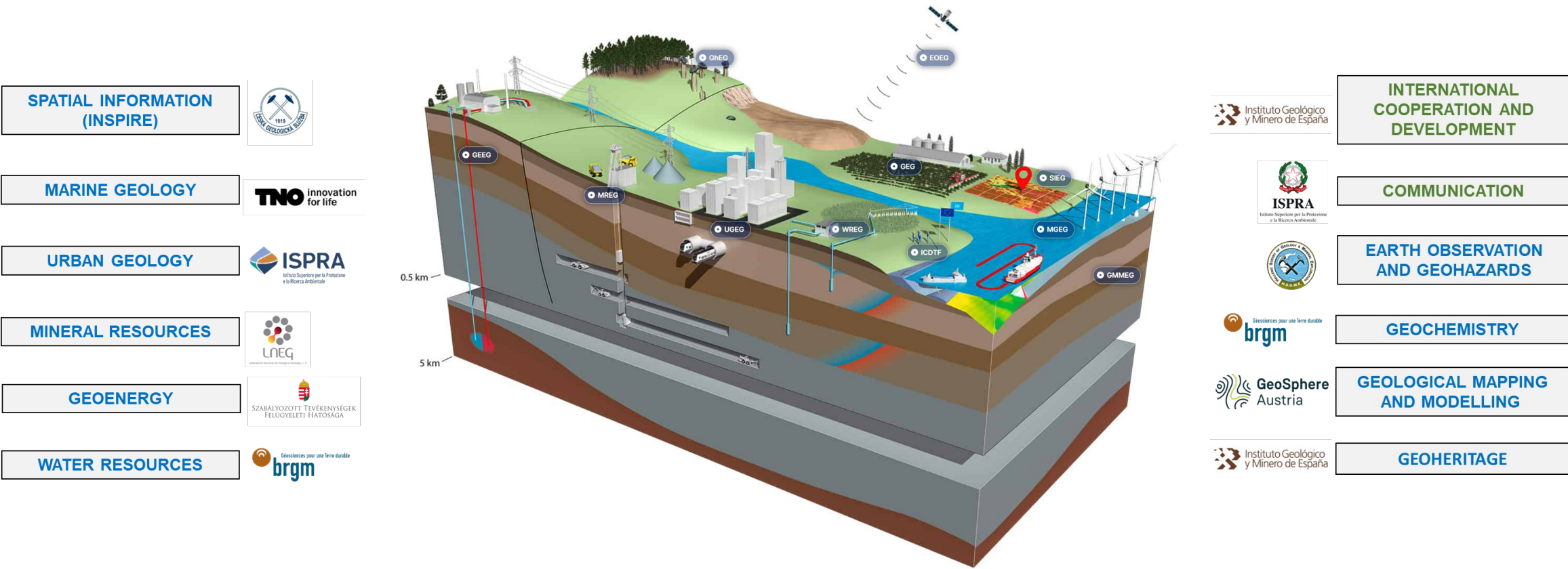
**Over 700+ million €  
annual turnover**



ALBANIA  
AUSTRIA  
BELGIUM  
BOSNIA & HERZEGOVINA  
CROATIA  
CYPRUS  
CZECH REPUBLIC  
DENMARK  
ESTONIA  
FINLAND  
FRANCE  
GERMANY  
GREECE  
HUNGARY  
ICELAND  
IRELAND  
ITALY  
KOSOVO  
LATVIA  
LITHUANIA  
LUXEMBOURG  
NETHERLANDS  
MALTA  
NORTH MACEDONIA  
NORWAY  
POLAND  
PORTUGAL  
REPUBLIC OF SRPSKA  
ROMANIA  
SERBIA  
SLOVAKIA  
SLOVENIA  
SPAIN  
SWEDEN  
SWITZERLAND  
UKRAINE  
UNITED KINGDOM

# EuroGeoSurveys Expert Groups

Hundreds of experts from the different National Geological Surveys are engaged in EGS's Expert Groups, carrying out research that directly tackles today's diverse societal challenges and helps to build a sustainable future for us all.



# Subsurface Data in the News



# Subsurface Data in the News

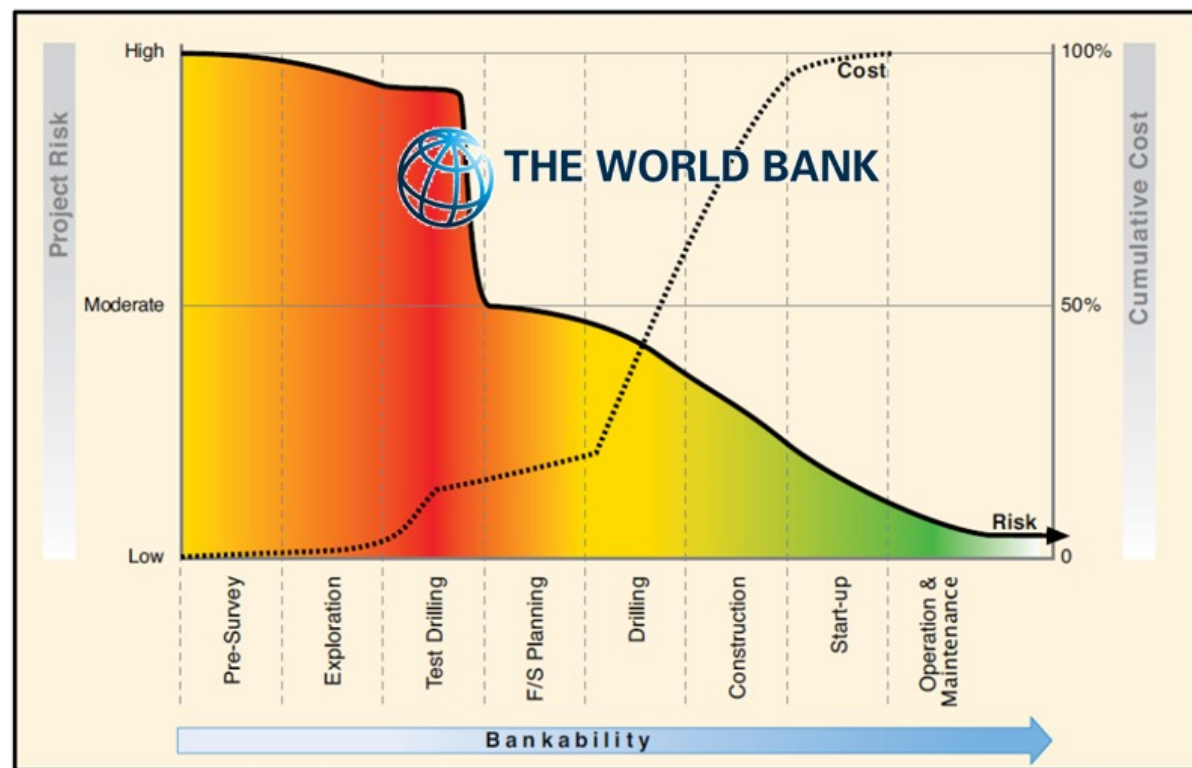
FINANCIAL TIMES

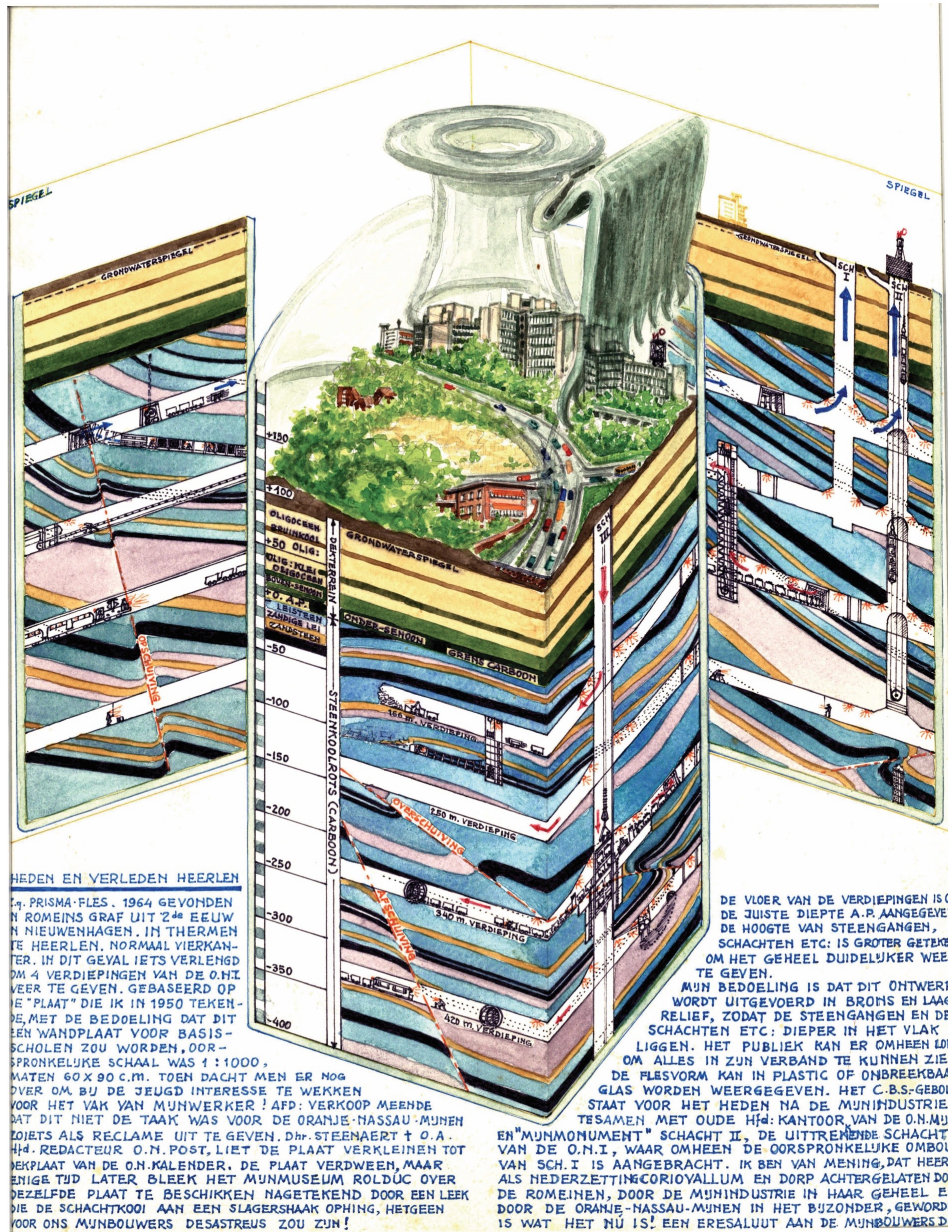
## EU sounds alarm on critical raw materials shortages

Europe's groundwater – a key resource under pressure

## Europe's groundwater — a key resource under pressure

European Environment Agency





There is a Critical Need of High Quality Subsurface Data!

# GSEU: from Geological Data to Policy Support

INTEROPERABLE GEOLOGICAL DATA

3D GEOLOGICAL FRAMEWORK

Energy  
Minerals  
Ground water  
Climate  
Build environment

IMPACTS & PROTECTION

DECISION SUPPORT INFORMATION

*Adding value to Research & Innovation:  
from Science to Society*



# GSEU: Structure



Developing Harmonised Data & Information Service

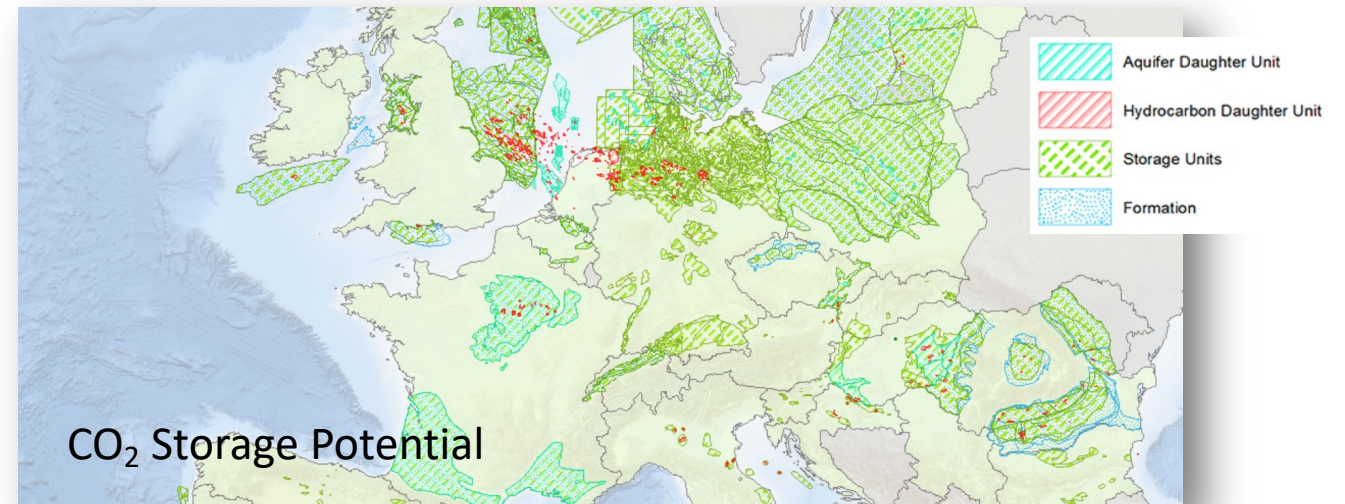
Developing Information Structure

Communication, Dissemination, Exploitation & Outreach

# European Geological Data Infrastructure (EGDI)

The National GS have collected large volumes of subsurface data for decades (some for centuries!).

The Spatial Information Experts group gathered, digitised and harmonised the various data held by the Geological Surveys of Europe and deliver them through EGDI.



EGDI holds more than 800 data layers of data, and a database of 3D models.

In the GSEU project, EGDI will be taken to a new level by transforming the current data infrastructure into a **knowledge infrastructure**, supporting the delivery of knowledge to policy makers and other stakeholders.

# EGS – GSEU & the Mining Sector

# EGS – GSEU & the Mining Sector

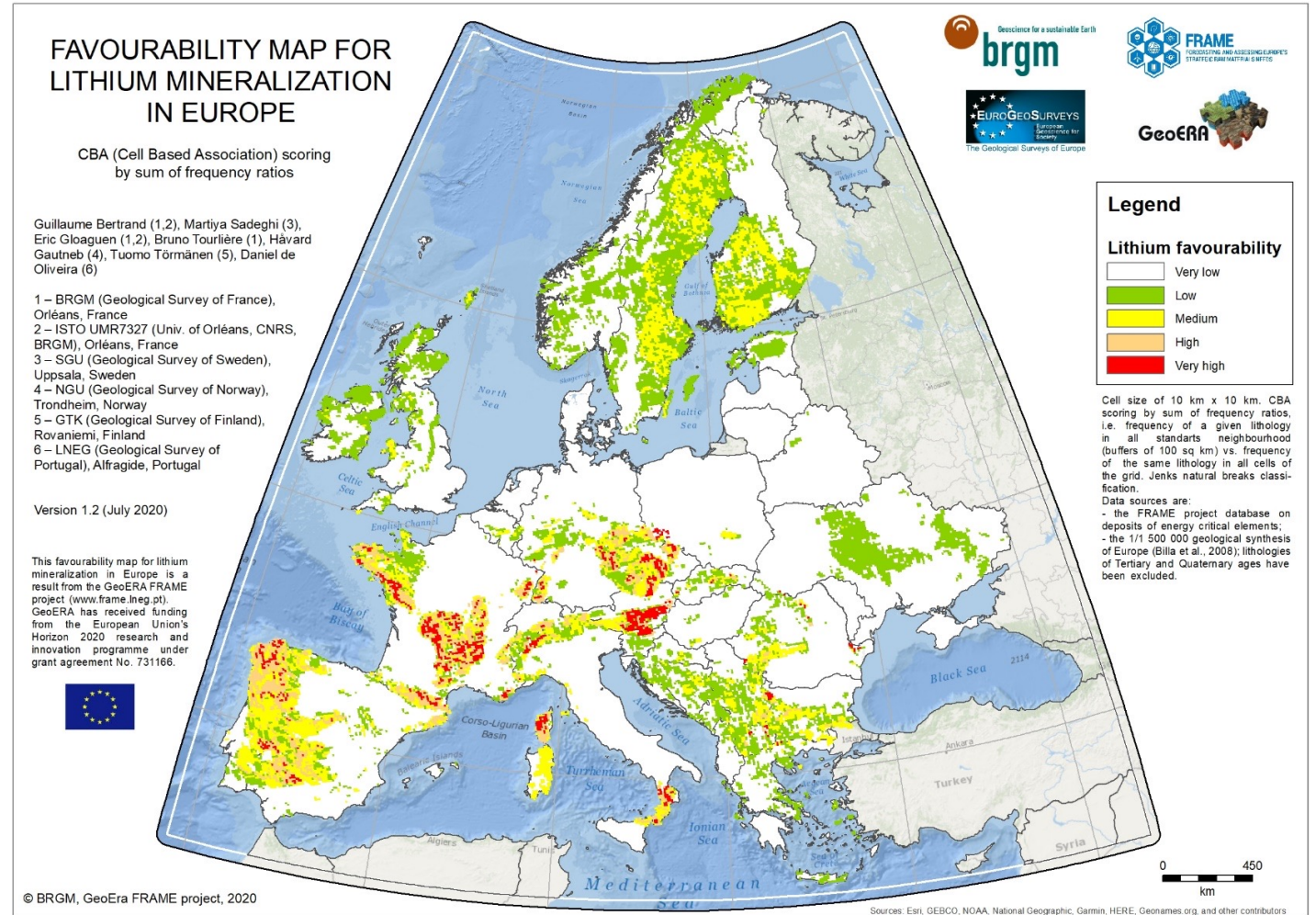
EGS and GSEU can play a key role in helping to address the challenges facing the mining industry in Europe:

- **Geological Data Management:** by providing advice and support on data collection, standardization, and management, better-informed decisions based on high-quality and reliable data can be made
- **Geoscience Research & Innovation:** by developing more accurate geological models
- **Policy Advice and Regulation:** EGS and GSEU can provide advice and support to governments and other stakeholders on policies and regulations related to the mining industry (e.g., advice on sustainable mining practices, environmental regulations, and social responsibility standards).



# GSEU – Raw Materials

- Re-evaluation of European potential in primary onshore and offshore CRMs and mining wastes
- Development of the use of the UNFC classification system in mineral resources databases
- Creation of an International Center of Excellence on Sustainable Resources Management
- Added value knowledge (databases, maps of metallogenic potential, mineral prospectivity maps, etc.) that will be freely accessed via the EGD platform.



# COOPERATION IS OUR STRENGTH AND FUTURE

*Follow us on - Click the icons to follow*



The Geological Surveys of Europe



*If you would like more information, contact us*

E-mail: [info@eurogeosurveys.org](mailto:info@eurogeosurveys.org)

E-mail: [info@geologicalservice.eu](mailto:info@geologicalservice.eu)

